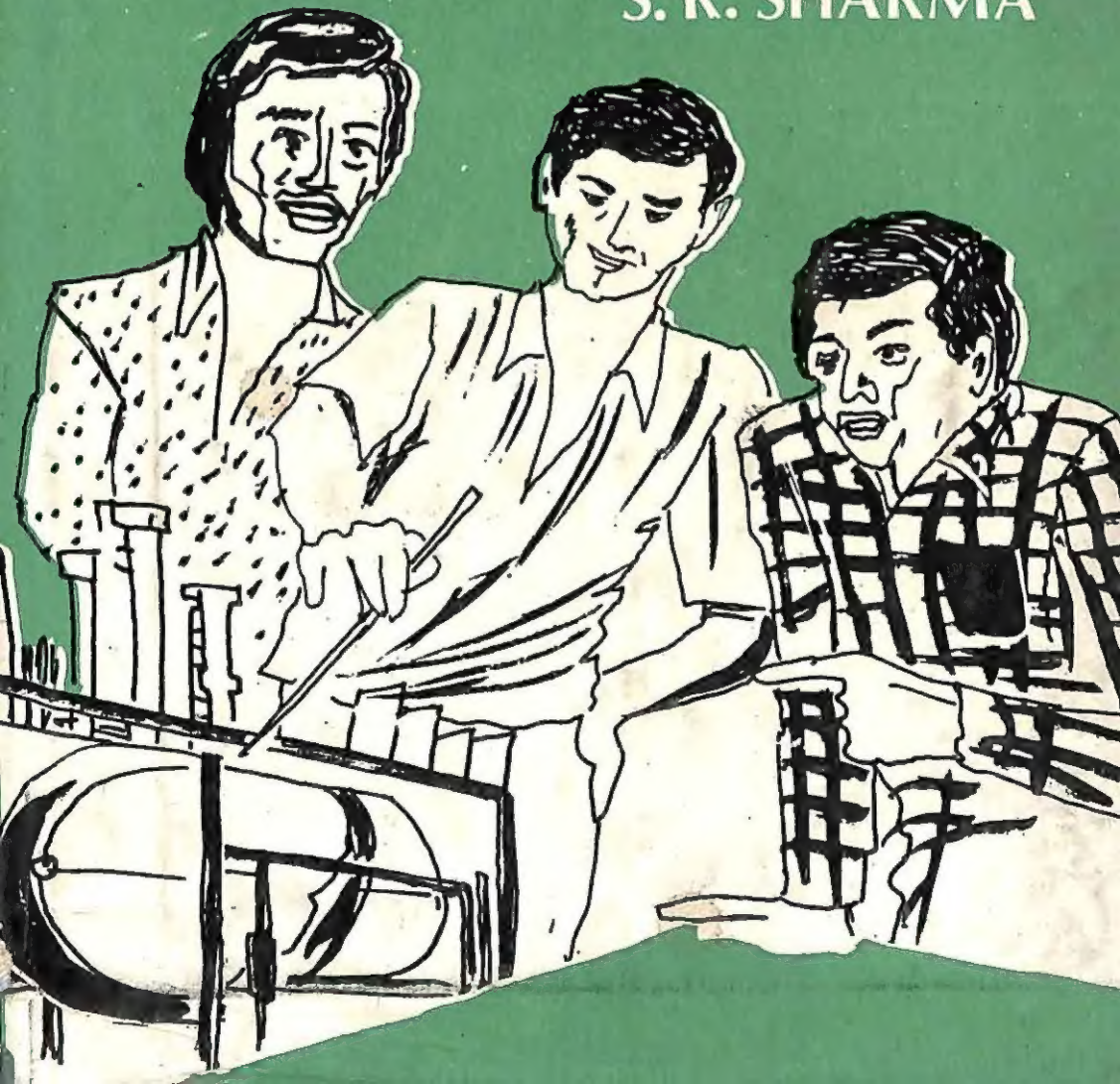


VOCATIONAL EDUCATION AND TRAINING

HISTORY, METHODOLOGY, ISSUES
AND PERSPECTIVE

S. R. SHARMA



This fact became very clear to the Indian leadership that independent India needed a different kind of education for its social development. Many Committees and Commissions were set up to analyze the existing system and to suggest various measures to reorient its educational system. The recent new education policy which was enunciated in 1986 strongly recommended that the secondary school education should be revamped for a vast majority of the students who leave the school and enter life. For such a large majority of students vocationalisation of education became the need of the hour. This is true that India does not have a history and tradition of vocational education and as such it has to learn from the experiences of the Western countries especially America.

These three volumes discuss the history and the methodology of vocational education and its suitability in Indian context. It is hoped that these volumes will initiate thinking in the field of vocational education and would help in finding out the new contents and methodology of vocational education according to the needs and aspirations of the Indian society.

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*History, Methodology, Issues
and Perspective*

(Volume III)

S. R. SHARMA



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Contents

PREFACE	vii
1. Introduction	1
2. American Occupational Conference	26
3. The Vocational Education in Boston and Harvard	45
4. Need for Vocational Education	60
5. History of Vocational Education in America	107
6. The Development of Vocational Education	128
7. Federal Participation in America	154
8. Financing of Vocational Education	185
9. Vocational Education and Modern Society	227
10. The Place of the Federal Government in Vocational Education	279
11. Organized Labour on Vocational Education	290
12. Some Conclusions	325
APPENDIX	335
INDEX	351

Preface

This fact became very clear to the Indian leadership that independent India needed a different kind of education for its social development. Many Committees and Commissions were set up to analyze the existing system and to suggest various measures to reorient its educational system. The large number of graduates/post-graduates that our universities are producing every year in traditionally set pattern is proving mere wastage of scarce national resources and is only adding to already deteriorating employment position and quality of life. The recent new education policy which was enunciated in 1986 strongly recommended that the secondary school education should be revamped for a vast majority of the students who leave the school and enter life. For such a large majority of students vocationalisation of education became the need of the hour. This is true that India does not have a history and tradition of vocational education and as such it has to learn from the experiences of the Western countries especially America.

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SITA RAM SHARMA

1

Introduction

Whenever one seeks to discover the beginnings of vocational education, whether it be in the field of industrial education, art education, home economics education, or part-time education, he finds his most fruitful field of study in the history of apprenticeship. And, if he tries to trace the development of the factors that enter into present-day problems of vocational education, he must study the breaking down of the old-time apprenticeship system and the various efforts to provide substitutes for it. The vocational education of the present day is a modern substitute for an essential part of medieval apprenticeship—that part which can be taken over by the school. To a very large extent, present-day problems in vocational education arise because of the various interpretations of what part can advantageously be taken over by the school and what still belongs to the industry, the business, or the home.

The most important fact about the earliest form of apprenticeship is that the relationship between master and apprentice was that of father and son. Apprenticeship grew out of home relationships, and it retained those relationships more or less unchanged down to the time of the Industrial Revolution. The early Jewish law placed upon the father the

duty of teaching a trade. The Talmud contains these sentences: "As it is your duty to teach your son the law, teach him a trade."¹ The usual custom was for the son to go to the school of the rabbis in the morning to learn the law and for him to remain with his father in the afternoon learning his father's handicraft. In this plan of education is seen the prototype of the present part-time school. Two other sentences from the Talmud reveal one of the basic motives for this practice among the Jews: "He who does not have his son taught a trade prepares him to be a robber." "Disobedience to this ordinance exposes one to just contempt, for thereby the social conditions of all are endangered."² Clearly, the ancient Jews associated skill of hand and industriousness with good citizenship and the lack of these with social parasitism or something worse.

From the Babylonian code of about 2250 B.C.³ one learns that it was more or less customary for an artisan to adopt a son and then teach him his handicraft.

In fact, the law required him to teach the handicraft; otherwise, the adopted son might legally return to his own father's house. Whether the motive of the artisan in adopting the son was to secure the economic benefits of the son's labour or, as Mays has recently pointed out to be the case under the Hindu law,⁴ to meet the religious requirement that certain funeral ceremonies be continued by a son, we know that the father-son relationship was carried over into the early practice in apprenticeship. The apprentice was to be treated essentially as a son would be treated in matters pertaining to food, clothing, shelter, moral and religious instruction, correction and punishment, and instruction on good citizenship as well as in matters pertaining to instruction in the processes, the arts, and the "mysteries" of the craft. To what extent the early laws and regulations concerning adoption and apprenticeship had been violated is not clear, but it is certain that, to avoid misunderstandings and trouble, indentures, stating the conditions of apprenticeship, were recommended by Xenophon before the Christian era and that as early as 18 B.C. indentures were employed in Egypt. "They relate to the trade of weaving,

nail-making, flute-playing, short-hand writing, and hair-dressing."⁵

The first of these—the "keep"—was a substitute for the provision of physical needs that would naturally have been given to the apprentice if he had been living in his father's home.

The second—moral, religious, and civic training—came through the master and his family, through the church that he attended, and through his contact with the town authorities and the community celebrations of various kinds that were common in those days.

The third—general education—varied much, depending upon the knowledge of the master and his interest in teaching his apprentice. Usually, it included reading and writing and sometimes ciphering. In some cases, especially where the apprenticeship extended over a long period—from nine to twelve years—the apprentice would be sent to school for a year to learn "grammar" or a foreign tongue.

The fourth—the "mysteries"—consisting of the secrets, rules, recipes, the applications of science, mathematics, and art which were useful in the trade, were taught by the master from time to time as they were made use of in the work.

In England, it came to be customary to have each indenture enrolled by the town clerk and to require each apprentice to take an oath that he would obey the laws. This was a good lesson in citizenship. Moreover, it emphasized the fact that, not being old or skilled enough to be a member of a guild, he was under the supervision of the town authorities. The town would protect him against any gross mistreatment from his master and protect his master against any gross misdemeanors on the part of the apprentice. The town authorities would enforce the ordinances concerning his apprenticeship and see that he lived up to his contract. The indenture usually called for an apprenticeship covering seven years.

It is readily seen, therefore, that the medieval apprenticeship which grew out of a father-son relationship provided:

1. Keep, i.e., food, clothing, shelter, and parental care.
2. Moral, religious, and civic training.
3. General education according to the customs of the time.
4. The mysteries, i.e., the technology of the trade.
5. Practical knowledge and skill in all the process of the trade or craft.

The fifth—the practical knowledge and skill—covered all processes in all branches of the trade, not merely a section of it. The method of learning was chiefly through imitation of the master.

Apprenticeship, then, in medieval times was not merely a scheme of trade and technical training; it was also an educational institution, giving the boy of that time all the fundamental or general education he would ever get. It was the chief educational institution for the middle-class youth. Up to the nineteenth century, the great majority of the people, even in the most progressive nations, received very little, if any, schooling. As a matter of fact, apprenticeship was sometimes valued more because of its general educational and disciplinary value—its moral and religious instruction, its teaching to read and write and cipher, and its practical certainty of leading to a position of respectability—than for its technical and trade training. This was especially true in the estimate of mothers and guardians.

The English Poor Law of 1601 made it lawful for church wardens and overseers to apprentice pauper children. The purpose in this case was not so much to secure for these children a trade as it was to see that they were provided with food and clothing and a home under a responsible guardian. Such children were usually bound out until they were twenty-one years of age.

In the New England colonies, when masters were not capable of teaching their apprentices to read and write, they were required to send them to schools. For this reason, elementary schools appeared very early in Massachusetts. In 1647, the General Court ordered that every town of fifty householders should appoint one within their number as a school teacher. He was to be paid by the parents and masters or "by the inhabitants in general,"⁶ Under this law, many towns established free schools.⁷

It should be kept in mind that medieval apprenticeship at its best existed under an individual-craftsman system of production; each master workman had his own shop or working place and, to assist him, one or two or a very few apprentices and sometimes a journeyman or two. It was always production on a small scale. The master knew the whole of the trade, and he taught the whole of it to his apprentices. Often his shop was in his home, and his home was also the place where his products were sold direct to the consumer. As soon as production on a large scale began by grouping many workers in one room, the master could not give the same personal attention to his apprentices; he could not teach them effectively. Instead of continuing to be a master craftsman, he gradually became merely an employer, and the apprentices were managed by the journeymen—five to ten apprentices to a journeyman. And as the division of labour became more common, the apprentices were kept busy on the work that they could do best or that was most profitable to the employer, and little or no thought was given to their instruction. The father-son relationship had given way to the employer-employee relationship. The apprentices became mere "hands" working for an employer at apprentice wages.

It is common to think of the factory system of production as having originated with the invention of power machinery, but there is evidence that as early as the fourth century B. C., the idea of division of labour and quantity production had taken root in Greece. Xenophon, in referring to the manufacture of shoes, says that in the large cities where many shoes of the same

kind were needed, one man might get a living by doing nothing but stitching, another by cutting them out or by cutting out upper leathers only, while another would merely put the pieces together. This system of production is said to have resulted in a large increase in the number of slaves.⁸

Quantity-production by division of labour or specialization in work, or what is known as the "factory system," received a tremendous impetus when, through the inventions of Kay, Hargraves, Arkwright, and Compton, power machinery became a commercial success in making cloth, and textile manufacturing on a large scale began in England. Textile factories sprang up where there was adequate water power.

Instead of working in their homes under their own masters, the makers of cloth were now obliged to work in mills "under masters who made them work for what wages they chose to give, and during what hours they chose to dictate."⁹ Competition between manufacturers became keen. The demand for cheap labour was so great that children as young as eight years of age were brought into the factories and allowed to work twelve and even thirteen hours a day. Indeed, the demand for child labour was so great that the pauper children of the workhouses in the large cities were bargained for by the owners of factories and delivered in droves, the workhouse authorities being glad to get rid of them. These children were often housed in sheds or in the factories and given the poorest kinds of food, and the beds in which they slept were no sooner vacated by a day shift than the night shift took possession of them. The children were entirely at the mercy of those who regarded them solely as implements of labour.¹⁰ And this form of slavery was legal under the Poor Law of 1601. The children could be thus "apprenticed" until they were twenty-one years of age, if they lived that length of time. Many of them did not; the death rate was appalling. In 1796, the Manchester Board of Health, while investigating the spread of contagious diseases, pointed out some of the monstrous evils of the system. The heart of Britain was touched. Agitation against the inhuman treatment began. Sir Robert Peel, a manufacturer, championed the cause

of the children in Parliament. Through his influence, the first Factory Act was passed, in 1809. This limited the hours of labour to twelve between 6 A.M. and 9 P.M. It required that instruction in the three R's should be given to apprentices and included certain sanitary regulations and a system of inspection. This law, which required the factory owners to live more nearly up to the requirements of the old apprenticeship system, very naturally turned these owners against the system. They wanted child labour without the apprentice restrictions.

Meanwhile, James Watt had invented the steam engine, and with this available, the factory owners began to leave the isolated water-power sites and move their mills to centers where they could secure child labour without indentures and, consequently, without being required to feed, clothe, and provide schooling for the children. In 1814, the apprenticeship law was abolished. Then conditions became about as bad as they had been before the first Factory Act was passed. Sir Robert Peel again came to the relief of the children, and in 1819 an act was passed by Parliament which provided that "no child under nine years of age should be allowed to work in a cotton factory, and no young person under sixteen to work more than twelve hours a day exclusive of meals."¹¹

In 1825, through the efforts of Sir John Hobhouse, the age limit was increased from sixteen to eighteen, and the number of hours reduced to sixty-nine. In 1830, a comprehensive movement to better conditions began under the leadership of Lord Ashley (later the Earl of Shaftesbury) who made the fight for the ten-hour law. Southey, the poet, said of the conditions in the factories, "I do not believe that anything more inhuman than the system has ever disgraced human nature in any age or country."¹² Charles Dickens, after visiting the cotton mills of Manchester, wrote, "What I have seen has disgusted and astonished me beyond all measure. I mean to strike the heaviest blow in my power for these unfortunate creatures."¹³

Lord Ashley failed to get the ten-hour law, but the effort forced the Government to pass a new Factory Act in 1833

"which in respect to education was immensely in advance of all provision for the working class at the time,"¹⁴ and it established "the principle that labour and education should be combined."¹⁵

Under this statute children between nine and thirteen might only be employed if they had a voucher of having attended school two hours on six days in each preceding week. The Inspector might require the employer to make a deduction of one penny in the shilling from a child's wages, and pay the same for the schooling of the child according to his direction.¹⁶

This law was not satisfactory. It did not insure good schools for the children and did not wholly divorce the employer from educational responsibility. In 1844, a new act was passed permitting the employment of children for half time at eight instead of nine years of age, but the hours of labour were reduced.

The parent or person having direct benefit from the wages of the child employed on alternate days was forced to cause the child to attend school for at least five hours between eight in the morning and six in the evening on the weekday preceding each day of employment. Children employed otherwise than on alternate days were to attend school for three hours in each working day of the week during any part of which they were employed, or two and a half hours on winter afternoons.¹⁷

This new law accomplished two important things: It definitely placed the responsibility for the general education of working children upon their parents or guardians instead of upon the employer, as has been the case under the old apprenticeship law. It inaugurated the half-time schools for factory workers which, until 1870, were, in large measure, England's substitute for an adequate compulsory-education law.

While this substitute for the general education of the old-time apprenticeship was taking place in England, an important

movement among workmen and their friends was striving to provide a substitute for the mysteries of the apprenticeship system. This movement found its most popular expression in the mechanics' institute movement. Fabian Ware give the following account of its origin:

The pioneer in this movement was Dr. George Birkbeck. . . . While engaged as professor of Natural and Experimental Philosophy at the Andersonian Institution in Glasgow, Birkbeck was obliged to employ ordinary workmen to make his scientific apparatus, for there were no specialists in this branch of work in the town. On one occasion he employed a tinman to construct a model of a centrifugal pump. It was in the cellar which was the tinman's workshop that, surrounded by the workmen who were making the pump, he was struck with their ignorance as to its uses, and at the same time their desire to obtain enlightenment. It was here that he first conceived the idea of giving a course of gratuitous lectures for the scientific instruction of the working classes. In the programme for this course which he drew up shortly after, he announced his intention of establishing classes "solely for persons engaged in the practical exercise of the mechanical arts, men whose education early in life had precluded even the possibility of acquiring the smallest portion of scientific knowledge." And he added that "greater satisfaction in the execution of machinery must be experienced when the uses to which it may be applied, and the principles upon which it operates, are well understood, than when the manual part alone is known, the artist remaining entirely ignorant of everything besides."¹⁸

Dr. Birkbeck's lectures became immediately popular. Seventy-five persons attended the first lecture; 200, the second; 300, the third; and 500, the fourth. This was in the year 1800. In 1804, Dr. Birkbeck moved to London where, in 1824, he was instrumental in establishing the London Mechanics' Institution. Its object was "the instruction of the members in the principles of the Arts they practise and in the various branches of science and useful knowledge."¹⁹ The institution included a reference

library, circulating library, reading room, and a museum of machines, models, minerals, and so forth, and provided lectures on a great variety of scientific and practical subjects and classes for teaching, especially mathematical subjects and their applications. The membership rose to its highest point in 1826 when there were 1,477 members. Similar institutions were opened in all the larger centers of Britain and in such American cities as New York, Boston, Philadelphia, Baltimore, and Cincinnati. By 1841 there were 216 such institutions in Great Britain with a membership of more than 25,000. After a few years, the membership grew smaller, because many of the men whom they were intended to help most were unable to profit by the lectures. They had received too little fundamental education to be able to comprehend them unless given in the simplest possible way. Demonstrations and illustrated lectures, therefore, became the most popular.

While the mechanics' institutes did not accomplish all that was hoped for them, they did render a real service in stimulating an interest in acquiring knowledge—especially of the natural sciences and their applications in industry—in pointing out the need of public elementary schools, and in laying the foundations for many of the present technical schools and colleges. To give proof of the value of the mechanics' institute movement in America, one hardly need do more than name the Franklin Institute in Philadelphia, the Mechanics' Institute in Cincinnati, the General Society of Mechanics and Tradesmen in New York City, and similar institutions in other cities. These have rendered a great service, especially in the direction of providing a modern substitute for the mysteries of the old apprenticeship.

In order to find the best examples of early efforts to substitute school instruction for the apprenticeship method of teaching the trade processes, it is necessary to cross the English Channel to France. For several centuries, entrance to the handicrafts in France, as well as in England and other European countries, had been regulated largely by the guilds. In France, the guilds, controlled by a few well-to-do masters, held a monopoly of trade privileges. It became extremely difficult and

expensive to gain admission to apprenticeship. For these reasons, toward the end of the eighteenth century, the guilds were very unpopular. The result was that, when the Revolution came, one of the early acts of the Constituent Assembly was definitely to abolish the guilds. Under this act, every person was at liberty to work at any trade or craft he desired, provided he could obtain a licence and would conform to certain regulations. Thus, the regulation of apprenticeship was suddenly transferred from the guilds to the government. It was only natural that this action should result in damage to apprenticeship and a lowering of the standard of workmanship. Early efforts were made to remedy these defects by further legislation, but the advent of power machinery and the factory system of production made them ineffective. So, to train her craftsmen, France began to look in another direction. Before this time, she had taken the lead among the nations in the establishment of art and technical schools. The French Academy of Painting and Sculpture was founded in 1648; a school for training engineers for bridge and road building was opened in 1747; a school of mines began its work before the Revolution; and the famous Polytechnic came into being in 1795. France believed in the school as a means of training technical experts and artists. Her national schools had been a success. Why not look to the schools to take over all the work of apprenticeship? Already she had one successful trade school. In 1788, the Duke of La Rochefoucault-Liaucourt established on his farm at La Montague a school in which the sons of non-commissioned officers of his regiment might receive a general education and learn certain trades. In 1799, government of the First Republic was so favourably impressed with its advantages that it was declared a national school and transferred to Compiègne. A few years later, Bonaparte visited the school, and he, also, was pleased with it and proposed to make it a school for training foremen. There were five shops in this school for, respectively:

1. the trades of blacksmith, fitter, machinist, and metal turner;
2. the trade of foundryman;

3. the trades of carpenter, joiner, and cabinet maker;
4. the trade of wood turner; and
5. the trade of wheelwright.²⁰

In 1826, two-thirds of each day were devoted to manual work and linear drawing, and the remainder to theoretical instruction.

Another school giving effective instruction in the trade processes was established, in 1827, by the Christian Brothers of St. Nicholas. In this school, which occupied an old convent building in Paris, the instruction in shop work was given by foremen from the different factories in Paris. The plan of instruction, however, was only one step removed from the ordinary apprenticeship of the time, because the boys entered into an working agreement covering three or four years, and the manufacturers furnished the teachers and the materials on which the boys worked and kept the shops in repair, in return for which they received the labour of the boys in the finished work turned out.

The value of school instruction in the processes of a trade was discussed at length in the report of the French Commission of 1865 on technical education. This report classified such instruction as follows:

1. instruction in schools of weaving and otherwise, chiefly for orphans, in which the purpose was to train machine operators or, as the report says, "apprentices of the humblest order";
2. the comprehensive instruction needed to give a boy a trade;
3. a more limited amount of practical experience combined with theory needed to produce foremen and superintendents.

The members of the Commission thought that all of these, when suited to local conditions, deserved the encouragement of

the state, yet they took stand that the chief object of instruction in the shop should be to train all-round mechanics and not machine operatives. And they believed that this was possible. In support of their contention, they referred to the fact that several schools, especially those under the Christian Brothers, were sending out boys at the end of three or four years who were able to "obtain wages at least as high as those earned by ordinary apprentices." They had accomplished this while giving the boys "general and technical instruction up to the limits required by their social position." Moreover, the habits of order and morality acquired by these boys caused them to be "sought by the heads of workshops."²¹

On the other hand, the Commission recognized the seriousness of the criticism that the school shop did not accustom its pupils to work with that rapidity of execution which is fundamental in economical production. They believed that this could be remedied by "a good organization, meeting as far as possible the normal requirements of industry."²² In spite of what they believed was possible, they did not look forward to any large proportion of the necessary workmen's being trained in the schools. They considered that the great mass of apprentices would have to be trained in the factories.

In 1868, a very important step forward was taken in teaching the processes of a mechanical trade. The government of Russia was in need of more practical engineers and more mechanics for its railway service. The problem of helping to supply them was turned over to the Imperial Technical Railway School at Moscow. The director of this school, Victor della Vos, realized that the usual process of training mechanics by the apprenticeship method was slow and uneven in its results. Working in the spirit of a production engineer, under a military system, he wanted to produce a higher grade and more uniform product in trained workers in a shorter time and at a lower cost. He concluded that he could not accomplish this by apprenticeship methods in the regular production shops connected with the school. He, therefore, established a new set of shops which he called "instruction shops" to distinguish

them from his production shops. For each of the instruction shops he provided a teacher to give instruction to a large class instead of to a few individuals. He equipped each of these shops with as many working places and as many sets of tools as there were members in a class. Then he analyzed into simple elements the processes of each trade or art to be taught and organized these elements into tool and construction exercises. These were arranged in the order of difficulty of performance. A working drawing of each exercise was provided for every student in a given class. In each shop, the teacher, an expert mechanic, began the course of instruction by giving a demonstration lesson on the first exercise of the series and then requiring all members of the class to perform the same exercise, each member working at his own bench or forge or lathe or other working place, depending upon the circumstances. At the proper time, the teacher gave the second demonstration and, later, a third, and so on, until the first period of the course was completed. During this period, each student had learned the fundamental uses of all the tools. In the second period, elements of construction—in woodworking, joints—were taught in a similar manner but with less close inspection on the part of the teacher of the use of the tools. Such inspection was less necessary now, because correct habits in the use of the tools had begun to be found. In the third period, the students, working individually or in groups, made projects involving several or many elements of construction. During this period, the student did his own planning, and the teacher assumed the attitude of a superintendent. In this period, the purpose of the procedure was to develop the student's initiative and power to take responsibility.

As an economical and effective scheme for producing mechanics for the railway service, the Della Vos plan was a success. Indeed, it was much more than that, because it was just what industrial educators in many schools in other countries had been working toward and wanting. This system was shown at the Centennial Exposition in Philadelphia, in 1876, and made a profound impression. Almost immediately, courses of instruction based on the Russian principle of analysis

were developed in the leading trade and technical schools of both Europe and America. And although the system originated entirely as a scheme to facilitate the production of mechanics and not at all as a means of general education, in America it gave the first impulse to manual training work which developed into an important movement in general education.

It is true that, since that time, in both trade teaching and instruction in the manual arts as part of a general education, there has been a reaction against the particular form of course used by the Russians and others during the 'seventies and 'eighties. There has been a reaction against abstract exercises in shop work just as against abstract exercises in teaching language and mathematics and drawing. But the fundamental idea of analyzing an art or trade or manual occupation for teaching purposes has constantly gained in momentum, until its practice is axiomatic today.

Sixteen years ago, Dr. L. D. Harvey, of Stout Institute, at a conference of manual arts teachers held in Bloomington, Illinois, made the surprising statement that he wished we had \$40,000 to spend in making analyses of the different trades so that all of us might know better what to teach in manual training and trade schools. He saw farther into the future than the rest of us. We now recognize that what he said at that meeting was a prophecy. Since that time, this country has spent several times \$40,000 in analyzing trades and occupations; and from present indications, the work has hardly more than begun. It is this analytical work, first employed by Della Vos in Russia, that has enabled the school to improve upon the old apprenticeship methods of teaching the fundamental skills of many trades. But the use of this type of analysis has not stopped at the school; it has become the basis of apprentice teaching in many factories. It is now being applied in the training of foremen.

Recapitulating, it is seen that the old-time apprenticeship was broken down by the invention and use of power machinery, the development of the factory system, and the consequent

demand for cheap labour. In the readjustment that took place during the nineteenth century, the responsibility for the keep, the moral and religious training, and the general education of the young worker were definitely transferred from the master or employer to the parent or guardian. Then, to give relief to the parent or guardian, free public elementary schools came into being, furnishing a better type of education than the old apprenticeship. For the mysteries of the trade there was substituted the class work and lectures of the mechanics' institutes and a variety of co-operative and philanthropic institutions. The instruction in these consisted, for the most part, of mathematics and its various applications, drawing—freehand, mechanical, architectural—and the natural sciences, especially their more common applications in machinery and the various industries. As a substitute for the apprenticeship method of teaching trade processes, the school made comparatively little progress before 1870. There was grave doubt whether the school could ever take the place of apprenticeship in teaching the processes of a mechanical trade. Then came the Russian experiment based on a teaching analysis of several of the mechanic arts. This experiment demonstrated that the fundamental skills can be economically and effectively taught in school shops. The recent results of the analytical procedure have been far reaching. Trade analysis has expanded into occupation analysis and is affecting teaching far beyond the realm of industrial education. Yet with all this development, there are still doubts about the effectiveness of the school in providing a complete substitute for the educational features of the old apprenticeship. The school has demonstrated that it can furnish a superior type of general education including some moral and civic instruction—it can teach the mysteries, or what we now call the “technology” or the “related subject matter,” better than the industries are likely to do it—and that it can teach certain fundamental skills effectively. On the other hand, it still remains true that although special skills can be taught and requisite speed can be acquired in a school, they are usually most effectively gained in the industrial plant under a part-time co-operative plan or under a modern apprenticeship agreement.

When studied in its historical setting, vocational education has a broad foundation to rest on in the old apprenticeship system—a very worthy ancestor. The inheritance of vocational education, however, also includes a persistent conflict of forces which was born of the Industrial Revolution. This conflict has been between the machine and a narrow range of knowledge, on the one hand, and a more comprehensive trade and a wider range of knowledge, on the other. Out of this conflict and the changing social-ideals and economic conditions have come the present-day problems.

On June 8, 1936, President Franklin D. Roosevelt approved the George-Deen Act²³ authorizing increased appropriations of Federal funds for the support of vocational education. On the same date the President addressed identical letters to Senators Smith of South Carolina and George of Georgia, and to Congressmen Palmisano of Maryland and Deen of Georgia. The text of the letter was in part as follows:

I have approved H.R. 12120, a bill to provide for the further development of vocational education in the several States and Territories, because of my deep interest in providing our young people with adequate opportunities for vocational training. So many criticisms have been directed at the bill in its present state, however, that it seems to me advisable, before the act goes into effect on July 1, 1937, that a disinterested group review its provisions in relation to the experience of the Government under the existing programme of Federal aid for vocational education, and the relation of such training to general education and to prevailing economic and social conditions.²⁴

The Appointment of the Committee

In accordance with the intention expressed in this communication, the President on September 19, 1936, invited 18 individuals to serve on a committee to make a study of vocational education. The full text of the letter of invitation,

sent to each person asked to serve on the committee, is as follows:

At the time I approved H.R. 12120, which authorizes additional appropriations for Federal aid for vocational education in the several States and Territories, I indicated my belief that before the Act goes into effect on July 1, 1937, the whole subject should be reviewed by a disinterested group. It is my thought that such a group should study the experience under the existing programme of Federal aid for vocational education, the relation of such training to general education and to prevailing economic and social conditions, and the extent of the need for an expanded programme.

I take pleasure in inviting you to accept membership on a committee to make such studies and to develop recommendations which will be available to the Congress and to the Executive. The services of the several Federal departments will be available to this committee. Travelling expenses incurred by members in attending committee meetings will be met by the Government.

I hope that it will be possible for you to serve in this capacity and to assist in the development of a sound basis for a programme of vocational education which will be of maximum benefit to those affected.

The Committee held its first meeting on November 6 and 7, 1936. It was immediately realized that a fundamental attack on the problems of Federal relations to vocational education would require an extensive study. The Committee at its first meeting authorized the appointment of a director of studies and the development of a staff for the conduct of the investigation.

In the course of the studies carried on for and reported to the Committee it became increasingly evident that the problems of vocational education could not readily be disentangled from the larger questions involved in the whole matter of Federal relations to education in general. Furthermore, certain bills

authorizing a large expansion of Federal aid to education were introduced into the first session of the Seventy-fifth Congress and were given serious consideration. In view of these developments the President on April 1, 1937, enlarged the scope of the responsibilities assigned to the Committee and added four members.

The original expectation had been that the final report of the Committee on the subject of vocational education would be available in time to be considered by Congress in determining the amount of the appropriation for the fiscal year ending in 1938. With the expansion of the functions of the Committee, it seemed inadvisable to make a final pronouncement concerning Federal relations to vocational education until the study of education in its wider scope had been completed. A preliminary statement was agreed to by the Committee and presented to the President on April 24, 1937, making recommendations concerning the amount that should be appropriated for vocational education under the George-Deen Act for the fiscal year ending June 30, 1938.²⁵

Plan of Conducting the Investigation

The general plan for conducting the study of vocational education was to appoint specialists in each of the major areas of the whole field and to assign them responsibility for the preparation of memorandums on their special topics. These investigations were planned under the leadership of the Director and the Associate Director of Studies, and the memorandums in preliminary form were submitted to a number of experts for criticism. The titles of the principal memorandums and the names of the staff members who prepared them are as follows:

A Brief History of the George-Deen Act, by Lloyd E. Blauch.

The Administration of Vocational Education, by Walter D. Cocking.

History of Administrative Interpretations of Certain Phrases in the Vocational Education Acts, by Katherine A. Frederic.

Vocational Education and Training in India

The Development of the Statement of Policies for the Administration of Vocational Education, by Watson B. Dickerman.

Financing Vocational Education, by Leonard Power.

Research Functions of the Federal Board for Vocational Education, by Oswald L. Harvey.

Vocational Education in Agriculture, by Barton Morgan, assisted by Marion E. Olson.

Home Economics Education, by Clara M. Brown and Opal T. Rhodes.

Vocational Education in Trades and Industries, by Lewis W. Smith and J. Orin Powers.

The Experience of Industry with Vocational Education, by Stephen M. Loeb.

The Experience of Labour with Trade and Industrial Education, by Howell H. Broach and Julia O'Connor Parker.

A Brief Survey of Co-operative Diversified-Occupations Programmes in Six Selected Cities with Special Reference to Labour Standards, by Mary E. Skinner.

Vocational Education in Office Occupations, by Lewis W. Smith, assisted by Margaret Blander.

Vocational Education in Distributive Occupations, by Lewis W. Smith and Margaret Blander.

Vocational Guidance and Placement in Relation to Vocational Education, by Anne Davis.

Occupational Trends and Their Relation to the Problem of Vocation Education, by O. F. Carpenter.¹⁶

The Preparation of Vocational Teachers, Supervisors, and Directors, by Lloyd E. Blauch.

Federal Relations to the Vocational Education of Negroes, by Doxey A. Wilkerson and Robert C. Weaver.

Five basic sources of information and data were utilized in the study of vocational education: (1) Available published and unpublished reports and studies bearing on the problem; (2) an extensive series of questionnaires for the collection of data and opinions; (3) statements submitted by interested groups and persons; (4) organized conferences in which interested groups were invited to participate; and (5) informal conferences with a wide variety of persons having first-hand knowledge of the programme of vocational education. Through co-operation with the staff of the Regents' Inquiry into the Character and Cost of Public Education in the State of New York, a considerable amount of material collected in that study was made available for the investigation of Federal relations to vocational education.

Every organized group having anything to do with vocational education in the United States was given an opportunity, either through the conferences or by means of submitted statements, to present points of view for consideration by the Committee. Every effort was made to secure as representative a sampling of individual conferences as possible, and no person was denied opportunity for a hearing on a point of view pertinent to the problem of Federal relations to vocational education.

The Nature of the Study

The study was originally a staff study for the Advisory Committee on Education, for its consideration in developing recommendations with respect to vocational education. In addition to this staff study, the members of the Committee had available the proceedings of the conferences and the statements submitted by various organizations and individuals, as well as their own personal knowledge of the situation in vocational education, which, in the case of a number of members of the Committee, was rather extensive.

This study undertakes to survey in a fairly broad way the whole plan of organization for the federally reimbursed

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programme of vocational education, the outcomes of this service, the needs of the country for occupational preparation, and the manner in which those needs may best be met. The present treatment does not presume to go beyond the presentation and interpretation of the findings from this investigation.

The data and conclusions were based in the main upon the series of staff memorandums previously listed. The basic sources used in the investigation were reexamined, however, and some material was included which was not available at the time the original staff memorandums were prepared.

This study was the first attempt at an extensive outside appraisal of the federally reimbursed programme of vocational education in the United States. A committee of 52 citizens, appointed in 1929 by President Hoover and organized by Dr. Ray Lyman Wilbur, reported in 1931 on the general problem of Federal relations to education. The report of that Committee, prepared under the leadership of the late Dr. Henry Suzzallo, made considerable reference to the programme of vocational education, but did not attempt to survey it extensively. The report of the National Advisory Committee on Education, as that group was designated, has been of great value as a starting point for the present investigation. The attempt in the present treatment has been not only to consider the educational problems involved, but also to consider the social and economic relationships inherent in any programme of occupational preparation.

This study of vocational education was conceived primarily as an attempt to collect and interpret the existing factual information and opinions and the attitudes of those who in various ways have had close personal knowledge of the operation of the programme. Much of the latter sort of material came to the Committee in a confidential manner. Because of the nature of the inquiry and the kind of evidence considered. It is not possible to document or cite specific authority for each and every conclusion reached in this study, particularly where the attempt is to present a synthesis of the views of many

individuals who are in a position to speak from their personal knowledge of the programme.

In any report of a study of an operating programme, it is only natural that greater space should be given to discussion of the deficiencies and shortcomings than to the points of excellence that need no correction. Care has been taken in this study to mention the many praiseworthy features of the federally reimbursed programme of vocational education, but such points do not require so extensive a discussion as the features in which some revision seems to be desirable. It will be understood that this apparent distribution of emphasis does not indicate any lack of appreciation for the many excellent accomplishments of the programme.

Certain phases or aspects of vocational education were not treated in the study because attention was given then in other staff publications of the Advisory Committee on Education. Although the administration of the vocational rehabilitation of physically disabled persons has been closely associated with vocational education, the rehabilitation programme has so many distinctive aspects that a separate study has been devoted to it.²⁷ The Co-operative Agricultural Extension Service maintained through the land-grant colleges is treated fully in a separate study dealing with the land-grant colleges and their associated services.²⁸ Certain problems of vocational education peculiar to the Negro race are treated in a separate study dealing with Federal relations to the education of Negroes.²⁹

One of the difficulties encountered in the investigation of vocational education was the relative lack of previous evaluative research studies or even of adequate routine administrative data in form that would throw light on the achievements of the federally reimbursed programme. Although every effort has been made to develop materials of this sort for the present study, only a beginning could be made in the limits of the time and finance available. The process of evaluation begun in this inquiry should be continued under appropriate auspices.

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American Occupational Conference

An interesting chapter in the history of occupational adjustment was completed when the National Occupational Conference closed its doors on September 30, 1939. More than six years before—in February 1933—organization of the Conference was announced by Morse A. Cartwright, director of the American Association for Adult Education, in which organization the N.O.C. resided financially. The time was propitious for such an organization. Depression was playing havoc with the schools of the nation. Thousands of youth were being graduated from schools and colleges annually into a world that had millions of unemployed adults and seemed to offer no occupational security for anyone. Here and there, however, were cities and institutions in which youth in surprising numbers went from school to work in occupations for which they had been trained. Some of these schools approximated perfect placement records. Others were solving the problems of vocational guidance in commendable fashion. Nowhere, however, was there any agency for clearing information and practice concerning the problem. Out of this need for a central clearing house the National Occupational Conference was created.

In the six and a half years that followed, the Carnegie Corporation of New York appropriated approximately half a million dollars for work in this field. Part of this was for the support of the N.O.C., part for research and related projects conducted by the Conference, and part for projects undertaken by co-operating organizations. The work has included studies of occupations, research in the measurement of individual differences having occupational significance, experiments, demonstrations, and evaluations of operating programmes of occupational adjustment.

Many individuals have contributed much in the way of counsel and active support to the accomplishments of the N.O.C. General Robert I. Rees, Mr. Cartwright, and Franklin J. Keller were closely identified with the founding of the Conference, Dr. Keller being the first director and serving until July, 1936. The valued advice of Walter A. Jessup, President of the Carnegie Foundation for the Advancement of Teaching, and the understanding support of Frederick P. Keppel, then President of the Carnegie Corporation of New York, were available to the Conference at all times. The vigor and resourcefulness of J. Walter Dietz and his previous experience as a member of the Executive Committee made him a most worthy successor to General Rees as Chairman. Most helpful also was the generous assistance of the N.O.C. Technical Committee under the chairmanship of Donald G. Paterson, Professor of Psychology at the University of Minnesota. To these should be added the names of Anna L. Burdick, Harold F. Clark, Harvey N. Davis, James E. Russell, Thomas G. Spates, Alexander J. Stoddard, and Ben D. Wood, all members of the Executive Committee. They have served without stint, and their wise counsel has kept the Conference on a steady keel throughout the six years.

The report that follows will aim to present concisely the record for each of the main lines of activity which the N.O.C. has carried on.

Publications. Almost immediately upon formation the Executive Committee faced the problem of publications. The

question of a periodical was quickly answered by conversations between Dr. Keller and officers of the National Vocational Guidance Association which led to an agreement whereby the two groups became co-operating publishers of the magazine.

The Magazine. When the N.O.C. was organized the Trustees of the National Vocational Guidance Association accepted a mutual benefit proposal that the Conference become co-publisher, with the addition of the word *Occupations* to the then existing name, *The Vocational Guidance Magazine*. The 48-page periodical, with a paid circulation of fewer than 2,000 was increased in size and in the scope of its offering. In three years the number of readers had grown by 50 per cent to nearly 3,000, and in the succeeding three years the 1936 figure was increased by more than 100 per cent to approximately 6,500 paid subscriptions. This expansion is credited to an increased interest throughout the nation in vocational guidance and related activities in the general field of occupational adjustment, especially in placement and follow-up for out-of-school youth. It should be noted also that during the last three years there had been in effect an editorial policy that called for presentation of magazine articles and departments as completely *practical* in their application as it was possible to obtain. Typical among comments of readers was one that declared: "*Occupations* is far better than ever. In fact, it's getting to be a magazine that challenges comparison with any of them, for meat, for readability, for usefulness, and for downright interestingness!" Appeal to reader interest through useful and helpful information has been a primary objective, and its reception appears to warrant continuance of this policy.

The six volumes of the magazine beginning with the issue for June 1933, contain a total of approximately six thousand pages. More than five hundred special articles have been contributed by nearly as many authors, including some of the most prominent individuals in the fields of education, commerce, industry, and labour. The great diversity of subjects covered and the calibre of authors may be observed in the subject and author indexes of the six volumes, XII to XVII inclusive, which

appear on pages 837 to 860 of the June, 1939, issue. Three supplements were issued: *New Frontiers in Guidance* (March, 1934); *Breathitt County in the Southern Appalachians: Vocational Guidance in a Social Setting* (June, 1936); and *Vocational Guidance in Rockland County* (May, 1936).

Special numbers were published on the following topics: *Occupational Distribution and Trends* (February 1934); *Analysis of the Individual* (April 1934); *Mental Hygiene and Guidance* (November 1934); *Vocational Guidance and Education for Negroes* (March 1936); *Criteria of Vocational Success* (June 1936); *The Social and Vocational Rehabilitation of the Tuberculous* (April 1937); *Youth and Labour* (March 1939); and *Jobs of Tomorrow* (May 1939). There have also been annual numbers reporting conventions of the American Council of Guidance and Personnel Associations.

Scores of articles from the magazine have been reprinted in full or in abstract form in other periodicals, attesting to the value of the material presented. Wherever occupational adjustment problems are discussed it is rare indeed that *Occupations* is not mentioned; it has come to be recognized as a highly valuable handbook and reference work in vocational counselling, in placement, and in problems of young people. It is particularly worthy of note that no other monthly magazine in the country contributed as many references to *American Youth: An Annotated Bibliography*, published last year by the American Youth Commission.

Early in 1938, when it became evident that the work of the N.O.C. was nearing completion, the National Vocational Guidance Association appointed a Committee on Future Policy and assigned to it the task of preparing the way for the Association to resume full responsibility for publication of the magazine. A plan was presented at the 1939 Convention in Cleveland which included authority for the Committee to negotiate with the Carnegie Corporation for a final grant to facilitate this transfer. This request was approved subsequently at the April meeting of the Carnegie Corporation. With the funds thus made

available the Association hopes to make the magazine self-supporting.

The final grant from the Corporation enabled the new Editorial Board to retain the same general format of the magazine. By decision of the N.V.G.A. Trustees and Delegate Assembly the number of issues per year was set at eight instead of nine, October through May. A slightly smaller size of type permitted inclusion in eighty pages of as much or more material as had previously appeared in ninety-six pages. A lighter weight paper and a less expensive style of binding gave the appearance and "feel" of less bulk but provided greater ease in reading and handling. The cover design was changed also. The magazine office equipment of the N.O.C. was moved on July 1, 1939, to the Association's new headquarters in ample space provided by Teachers College, Columbia University. Harry D. Kitson continued as editor. Following publication of the October 1939, issue on September 15, Donald M. Cresswell resigned as managing editor and was succeeded by Ralph B. Kenney, formerly a counsellor in the Albany High School, Albany, New York, who served also as executive secretary of the N.V.G.A., succeeding Fred C. Smith.

In the six years that the N.O.C. has been co-publisher of *Occupations, The Vocational Guidance Magazine*, funds allocated from N.O.C. maintenance plus special grants from the Corporation have totalled more than \$ 100,000 for the magazine. The N.O.C. retired on June 30 from participation in its publication, confident in the belief that *Occupations* would continue to expand in usefulness and value to all who are interested in the advancement of occupational adjustment.

Occupational Index. Prior to the N.O.C. there was no bibliography of current literature describing occupations. To meet this need the *Occupational Index* was established in January 1936. It now covers regularly all new books, all United States Government publications, a large number of technical and general magazines, and the pamphlet publication of several hundred organizations. During its first three years

2,562 new references were listed, annotated, and indexed by subject, title, and author.

The *Occupational Index* has been incorporated and has received a terminal grant from the Carnegie Corporation which is expected to place it upon a self-supporting basis within a few years. The office and workroom of *Occupational Index* were moved to New York University on May 1, 1939. Robert Hoppock is the editor.

Occupational Abstracts. To make occupational information still more accessible, the N.O.C. in 1935 initiated a series of appraisals and abstracts of available literature—published in pamphlet form—each pamphlet covering a single occupation. More than sixty titles have been completed and approximately forty-one thousand copies of these have been distributed. Occupational Index, Inc., has accepted responsibility for continuing this programme as long as available funds permit, and for exploring the possibility of continuing on a self-sustaining basis. Editing and publication activities were transferred to offices at New York University on May 1, 1939.

Books and Reports. The first book to be published for the National Occupational Conference was *Job Satisfaction* by Robert Hoppock. It is the standard, almost the only authoritative volume dealing with this most important aspect of occupational adjustment.

Several bibliographies of material describing occupations were available when the N.O.C. was organized but none was both complete and up to date. The senior author of one of these publications was engaged to prepare a complete bibliography covering, as far as possible, all material published from 1920 to 1935. The result was *Books About Jobs* by Williard E. Parker, published for the N.O.C. by the American Library Association in 1936. The book was received with enthusiasm by counsellors everywhere, apparently because it met most effectively the need which had led the Executive Committee to authorize its preparation.

Aptitudes and Aptitude Testing by Walter V. Bingham was published for the National Occupational Conference by Harper's on February 19, 1937. Dr. Bingham wrote this book under a subvention from the Carnegie Corporation upon the request of the Executive Committee of the N.O.C. That the choice both of project and author was wise has been amply borne out by the reception of the book. The eager acceptance of the volume both as a text and as a reference indicates that the book will probably be the standard discussion in its field for some time to come.

In the spring of 1937 *Vocational Guidance Throughout the World* appeared. This admirable comparative survey was the work of Franklin J. Keller and Morris S. Veteles. Each of the authors had visited most of the countries about which he wrote, and for those not visited excellent reference material had been made available. The result was a penetrating overview of guidance practices in all the important nations of the world. No comparable volume had existed hitherto, so that the National Occupational Conference in under-writing the preparation of the manuscript performed a service out of all proportion to the investment represented.

The interim report of the Occupational Education Tour for School Superintendents entitled *Occupational Adjustment* was a 1938 publication of the National Occupational Conference. In the words of the superintendent who wrote it, "The report is an effort to state the essential principles of occupational adjustment as they have developed out of a year's thinking and experimentation on the part of the Tour members, and to review some of their efforts and accomplishments during the same year. . . Present plans contemplate another, perhaps several, interim reports, pointing toward a full and comprehensive statement when this seems justified by circumstances." The report has been widely circulated and has formed the basis for discussion at twelve Regional Conferences on Occupational Adjustment sponsored by the N.O.C. during 1938-39 in cities represented by the superintendents who participated in the tour.

In the preliminary steps toward organization of the National Occupational Conference, General Rees was one of the most active and interested of the small group of men who brought the body into being. It was he who was chosen Chairman of the Executive Committee, a position which he held until his sudden death on November 23, 1936. So highly did his associates in the N.O.C. hold his achievements that a special memorial booklet was prepared and published in 1938, *Robert Irwin Rees—An Appreciation*. A limited edition was provided for distribution among his many friends and associates.

One more N.O.C.-sponsored publication came from the press last May. This is a booklet reporting results of a special occupational adjustment study of the schools and community in Essex County, New Jersey. The study was made under the direction of Howard D. Campion, Assistant Superintendent of the Los Angeles, California, Public Schools. *The Vocational Schools of Essex County, New Jersey* is a significant contribution in that it presents an entirely new type of study covering a country unit vocational school system located in a thickly populated industrial area.

Grants to various other individuals and organizations, made by the Carnegie Corporation on recommendation of the National Occupational Conference, resulted in the following publications in addition to a number of special articles published in *Occupations*:²

Guidance Bibliographies for 1935 and 1936, by the United States Office of Education (1937).

Life Earnings in Selected Occupations, by Harold F. Clark and others (1938).

Occupations in Retail Stores, by Dorothea de Schweinitz (1937).
Women Workers Through the Depression, edited by Lorine Pruette (1934).

Publications of the Institute of Women's Professional Relations

Directory of Colleges, Universities and Professional Schools Offering Training in Fields Related to Health (1936).

Directory of Colleges, Universities and Professional Schools Offering Training in Professions Other Than Those Concerned with Health and Arts (1936).

Directory of Colleges, Universities and Professional Schools Offering Training in the Fields of Business and Industry (1937).

Dentistry—Its Professional Opportunities (1934).

Dentistry as a Profession (1934).

Special Librarianship as a Career (1933).

Business Opportunities for Home Economics Trained Women (1938).

Publications of the United States Office of Education

Minimum Essentials of the Individual Inventory in Guidance, by Giles M. Ruch and David Segel (Bulletin No. 202).

Guidance Programmes for Rural High Schools, by Paul W. Chapman (Bulletin No. 203).

Occupational Information and Guidance; Organization and Administration, by Harry A. Jager, Layton S. Hawkins, and Giles M. Ruch (Bulletin No. 204).

Field Service. In February 1933, the National Occupational Conference took over the field service activities of the National Vocational Guidance Association. There were available at that time a number of mimeographed lists of references on methods of teaching occupations, follow-up studies, homeroom guidance, college personnel work, and the theory and practice of vocational guidance, which were sent out in response to requests for such information. As the inquiries increased in number certain types of requests became familiar through the frequency with which they appeared. As soon as it became evident that there

was a continuing demand for a certain type of information, the N.O.C. undertook to have such information prepared in mimeographed or printed form. A number of articles in the magazine and a few of the research projects resulted from this attempt to meet the needs of working counsellors. In June, 1935, there were on the list of publications seventeen mimeographed bulletins and sixteen reprints; in June, 1939, there were four mimeographed forms, sixty-one occupational abstracts, and eighty-three reprints, several of the earlier mimeographed forms having been incorporated in articles for *Occupations* and later reprinted.

In the first three years of the N.O.C.'s existence there were 3,585 requests for help in solving counselling problems. In the three years ending February 1, 1939, the requests numbered 13,022, or a total of 16,607 since 1933. These came chiefly from librarians, high school principals and counsellors, college deans and placement officers, and students. In smaller numbers requests have come from superintendents of schools, state directors of education, government agencies (mainly the N.Y.A., the C.C.C., and the W.P.A.), personnel officers of business organizations, Y.M.C.A.'s and Y.W.C.A.'s, ministers, and hospital and prison authorities. The writers represented practically every section of the United States. Inquiries also have come from Cuba, Canada, the Philippine Islands, South America, Australia, and China.

Of the total number of requests approximately 11,000 were orders for printed material ranging from one publication to 1,000 in a single order. In round figures 41,000 occupational abstracts and 35,000 reprints of articles that have appeared in *Occupations* have been distributed. The main sources from which these orders have emanated are: individuals, 2,300; high schools, 1,700; libraries, 1,600; colleges, 800; local boards of education, 750; and government agencies, 300.

The handling of orders for printed material, although time-consuming, is of less importance than the answering of letters

from those who seek specific information or help. The greatest number of these have come from the following groups:

Individual. 800 inquiries regarding opportunities and training in more than 100 different occupations.

High school principals and vocational counsellors: 600 requests for information on such topics as lists of occupational books, cumulative record systems, organization and development of guidance programme, opportunities and training requirements in specific occupations, schools for the handicapped.

College counsellors, teachers, and placement officers: 400 inquiries including information on tests, employment statistics, college vocational guidance programme, personnel work for college women.

Local boards of education: 400 requests including most frequently inquiries regarding starting a county guidance programme, forms and methods used county and city occupation surveys.

Other groups, including parent-teacher associations, civic organizations, prison authorities, personnel directors of business organizations, National Youth Administration directors, education directors of the C.C.C., and state departments of education, have sent numerous requests for information on such topics as occupational and vocational guidance books for group discussion, use of personnel rating scales, vocational rehabilitation of handicapped persons, tests used for employee promotion, employee record cards, industrial counselling service, co-operation of civic groups with high schools in advising youth.

In November 1937, Mary P. Corre of the Vocation Bureau of the Cincinnati Public Schools came to the N.O.C. under a fellowship grant and assisted materially in bringing the field service to the attention of a greater number of counsellors, librarians, and government agencies than hitherto

had been aware of the service and the wealth of material available through the N.O.C. library and files.

Another important part of the field service work has been the consultation in the office by members of the staff with persons from all over the world. In the past six years these have numbered more than a thousand and have included visitors from British Columbia, New Zealand, Australia, China, Japan, South Africa, and Belgium. The staff members have travelled extensively to give advice in various communities on vocational guidance problems. Since the beginning of the N.O.C. they have met with 369 professional groups, have attended 178 meetings, and have given 295 addresses. Their articles, published in various magazines including *School and Society*, *Nation's Business*, *Education Digest*, *Vital Speeches*, *Child Study*, *Business Education World*, *National Education Association Journal*, *Phi Delta Kappa*, *Journal of Adult Education*, *American Vocational Association Journal*, and *Opportunity*, have numbered 68 in addition to those published in *Occupations*. There have been scores of invitations for service, articles and addresses which could not be accepted.

United State's Offices of Education. Early in 1938 conversations were begun which led to the organization on August 1, 1939, of a new Occupational Information and Guidance Service in the United States Office of Education, Washington, D.C.

The scope and duties of the Occupational Information and Guidance Service have been clearly described by John W. Studebaker, United States Commissioner of Education, in the November 1938, and April 1939, numbers of *Occupations*. One of its functions is the approval of plans for the setting up of occupational information and guidance divisions in the various states. Up to June 1939, such plans had been approved for six states—Maryland, Michigans, North Carolina, Pennsylvania, Georgia, and Maine—and the first three of these states had appointed supervisors or directors of Occupational Information and Guidance. Preliminary steps for approval of

plans had been taken (1939) by Massachusetts, Vermont, and North Dakota.

In the course of the organization of the Service, the following were retained as consultants for varying periods: Richard D. Allen, Walter V. Bingham, Paul W. Chapman, and Layton S. Hawkins. The new service has functioned efficiently under the able direction of Harry A. Jager as Chief. As of September 30 other members of the staff included Walter J. Greenleaf, Specialist, Occupational Information and Guidance; Royce E. Brewster, Specialist, Consultation and Field Service; Marguerite W. Zapoleon, Specialist in Occupations for Girls and Women; Eugenie A. Leonard, Consultant; Pedro T. Orata and Waldo B. Cookingham, Specialists.

In planning the work of the Occupational Information and Guidance Service it was agreed that eventually all field service and mail inquiries received by the N.O.C. should be forwarded to the Washington office. Transfer of these activities was completed on February 1, 1939. During the thirteen months following organization of the new Service members of the staff have made thirty-four field trips to forty-two cities, colleges, and universities in nineteen states and have delivered thirty-seven addresses to local, state, and national groups. To meet demands made upon the Service, thirteen, leaflets, lists, and bulletins aggregating 260 pages have been printed or mimeographed. Total distribution of the printed bulletins alone is estimated at 55,000 copies. Between August 1, 1938, and August 30, 1939, an average of one thousand requests for information and assistance had been received and answered each month. Reference already has been made to three major publications which the Service planned to have ready for distribution.

The Occupational Tour. One of the most significant activities of the N.O.C. was the Occupational Education Tour for School Superintendents. The possibility of the tour had been discussed early in the autumn of 1936 with Alexander J. Stoddard, chairman of the Educational Policies Commission of

the American Association of School Administrators. Dr. Stoddard's enthusiasm for the idea encouraged the director to present the matter to the Executive Committee of the N.O.C., who in turn recommended to the Carnegie Corporation that a special grant be made to carry out the project.

Ensued then a period of planning which involved the invitation and release from duty for two weeks of a representative group of superintendents; securing the co-operation of the administrative officers of the schools and cities to be visited; working out the actual details of the tour; arranging for network broadcasts from certain cities during the tour, and other publicity features.

On Sunday afternoon, May 2, 1937, the group of thirteen superintendents met in Chicago with N.O.C. staff members for preliminary organization and preparation for the days to follow. Early in the evening the men boarded the private observation—Pullman car that was to be their domicile for the next ten days, and an experience unique to all members of the group began.

The immediate result of the tour was the tentative report of the findings reached by the superintendents after the final two-day conference at Princeton Inn. A digest of this report and the story of the tour was published in *Occupations* for June 1937.

Throughout the year 1937-38 articles appeared in *Occupations* describing occupational adjustment programme experiments in each of the cities represented. The year culminated in a conference of the group held at Asheville, North Carolina, in May 1938, resulting in the N.O.C. bulletin *Occupational Adjustment*. At the Asheville meeting each of the superintendents agreed to sponsor a conference in his own region the purpose of which would be to extend the influence of the report. The story of these regional conferences appeared in the June 1939, issue of *Occupations* under the title "Occupational Adjustment from Coast to Coast."

What the final result of this experiment will be cannot be written at this time. The Carnegie Corporation has provided a generous terminal grant to Teachers College, Columbia University, which will facilitate the concluding activities under the guidance of the retiring director of the N.O.C. It was planned to have the original group of superintendents meet later for a further pooling of experiences and ideas. Ultimately a final report will be written which should take its place with other significant documents in American education.

National Occupational Conferences. Five regional conferences sponsored by the N.O.C., 1933 to 1935, brought together five hundred economists, psychologists, and personnel workers from secondary schools, colleges, and industry. The first was held in August 1933, at Camp Stevens, Johnsonburg, New Jersey; the second in January 1934, at International House, Berkeley, California; the third in April 1934, at Chapel Hill, North Carolina; and the final one in August 1935, at Estes Park, Colorado. A similar conference on guidance for Negroes was held at Atlanta University, Atlanta, in December 1935.

In each of these conferences major issues in occupational adjustment were discussed from all angles. A typical day's programme opened with a general session from 8 to 10 a.m. in which some current problem was briefly outlined in a ten-minute statement by some authority, extemporaneously and conversationally discussed for an hour by a panel of five or six persons representing conflicting points of view, and then opened for general discussion from the floor. From 10 a.m. until noon the conference divided into small groups for more intensive discussion of subtopics of particular interest to members of the smaller groups. Afternoons were left free for rest, recreation, and individual conferences. In the evening another general session on a different topic followed the general plan of the first morning session.

The results were invaluable to the N.O.C. in formulating its activities, and those who attended expressed their appreciation of this unusual opportunity to become well acquainted and

to exchange experiences with leaders in related fields whom they seldom met at other conferences.

Other Activities. The activities described above account for only twenty of the eighty-eight support grants made by Carnegie Corporation of New York for projects recommended by the National Occupational Conference. Even to describe all the others³ would be impossible in this brief report, but they include a number of activities that promise to become of steadily increasing significance. Three examples will serve to illustrate.

At the request of several professional organizations, staff services and funds were made available to facilitate the organization in 1934 of the American Council of Guidance and Personnel Associations, which has held six annual conventions and has made significant progress in the direction of more co-ordinated effort and less unnecessary duplication.

Dissemination of occupational and vocational guidance information by means of radio broadcasting, which today is so widespread, was inaugurated on a high plane through sponsorship by the National Vocational Guidance Association by means of annual grants from the Carnegie Corporation through the N.O.C., beginning in 1934-35 and continuing through 1936-37. Approved scripts were supplied through the Association's Radio Committee for weekly dramatized broadcasts over the Columbia Broadcasting System's School of the Air. The success of this service is reflected in the rapidly growing popularity and increase in the number of occupational information broadcasts through local and network channels. The ultimate value of this pioneering by radio in occupational adjustment service to youth and adults cannot be estimated.

Notable developments in occupational broadcasts have included the weekly "Americans at Work" series launched about a year ago as a chain feature of the Columbia Broadcasting System, and "On Your Job" started in June 1938, as a weekly National Broadcasting Company network programme.

The latter is conducted with the co-operation of *Occupations* and the National Vocational Guidance Association. Staff members of the N.O.C. assisted in shaping the techniques developed for the series. The Mutual Broadcasting System started a weekly "Success Session" in June, presenting interviews with individuals who have attained success in various types of occupations.

Through the co-operative efforts of the National Research Council and the National Occupational Conference, the United States Employment Service was enabled to begin an extensive research programme which is now continuing on a permanent basis with public support. Through this there have been developed improved techniques for the selection of workers in certain fields, and much of the ground work has been laid for the ultimate determination of common characteristics in certain hypothetical families of occupations, which determination would facilitate greatly the transfer, retraining, and re-employment of those who become the victims of technological unemployment. One tangible result will be the publication shortly of *Occupational Counselling Techniques* by William H. Stead and his associates (later published), a volume setting forth the significant accomplishments thus far achieved.

The Years Ahead. Thus the National Occupational Conference comes to "the end of the trail" as a physical entity—but in the spirit and in the effectiveness of its achievements, we trust, it will continue indefinitely as an aid to all phases of occupational adjustment throughout the nation. Begun in the hope that its services would help in an emergency situation, and carried on from year to year as its activities bore fruit, the N.O.C. may well regard its efforts as worthwhile if only in the light of assured continuation of its major activities through established and responsible agencies.

Through carefully planned and supervised research, through investigation, conference, and compilation, a great wealth of occupational and vocational guidance information has been assembled. Through the spoken and the printed word

there has been widespread dissemination of this information that has benefited and will continue to benefit youth and adults for years to come.

Definitely projected school and community programmes of occupational adjustment are still in their infancy; the years ahead undoubtedly will witness expansions beyond our greatest expectations. If, eventually, there be only small recognition of the efforts of the National Occupational Conference in the achievement of such developments, the sponsors and the members of the N.O.C. will be entirely satisfied.⁴

NOTES AND REFERENCES

1. Reprinted, with slight changes, from *Occupational, The Vocational Guidance Magazine*, June 1939.
2. Since Dr. Lee wrote the above another book supported by the N.O.C. has appeared, *Appraising Guidance in Secondary Schools*, by Grayson N. Kefauver and Harold C. Hand (1941). This present book received help from the same source.
3. See "The First Year—Annual Report of N.O.C." *Occupations*, June 1934; "Two-thirds of an Experiment," *Occupations*, June 1935; and "Accomplishments of N.O.C.," *Occupations*, January 1937—all by Franklin J. Keller, Director of N.O.C., 1933-36.
4. Those who have served as staff members of the National Occupational Conference since its inception have returned to former duties or have entered new or allied fields. Franklin J. Keller, director of N.O.C. from 1933 to 1936 returned to the principalship of the Metropolitan Vocational High School, New York City; Edwin A. Lee, director since July 1936, became Professor of Education at Teachers College, Columbia University, in the fall of 1938, continued with N.O.C. on a part-time basis till 1939, and in 1940 became Dean of the School of Education at the University of California at Los Angeles; Robert Hoppock, assistant director, is now Professor of Education and Chairman of the Department of Personnel Administration in the School of Education at New York University; Wilbur I. Gooch, field representative, resigned in the fall of 1937 to become Associate Professor of Education at Boston University; Raymond G. Fuller, former managing editor, conducted projects for the American Youth Commission and recently has been a free-lance writer; Rowena S. Hadsell, office manager, was executive secretary.

for a study known as "The Negro in America," conducted under the auspices of the Carnegie Corporation, Donald M. Cresswell, managing editor in later years, returned to his former work in publicity for the Pennsylvania State Department of Public Instruction and later became managing editor of the *American Vocational Association Journal*. Fred C. Smith, former editor, is Dean of the University of Tennessee; and Harry D. Kitson, editor, is Professor of Education at Teachers College, Columbia University.

The Vocational Education in Boston and Harvard

Although Parsons undoubtedly should be called the founder of the organized vocational guidance movement, his effort might easily have passed away without perpetuation when he was forced to give up his work.

Eight Necessary Persons. Every movement requires co-operative action for its full inauguration, and the movement for vocational guidance was no exception. It seems fair to say that the following eight people were each and all necessary to the founding and firm establishment of vocational guidance:

1. Frank Parsons furnished the idea for the Vocation Bureau and began its execution.
2. Ralph Albertson was Parsons' constant intellectual companion and co-organizer with him of the Breadwinners' Institute. He served as secretary to the board of trustees of the Vocation Bureau, conducted the first course for the preparation of counsellors, and prepared *Choosing a Vocation* for publication.
3. David Stone Wheeler, a progressive educator, succeeded Parsons as director of the bureau, and as such assisted.

the committee which began the first organized work in the Boston schools.

4. Meyer Bloomfield encouraged Parsons from the first, assumed the directorship after Wheeler, and called public attention everywhere to the need for vocational guidance.
5. Professor Paul H. Hanus gave the movement university sponsorship by serving as chairman of the board of trustees of the bureau, and arranging for summer school courses at Harvard University.
6. Pauline Agassiz Shaw supported financially both the Civic Service House, where Parsons first operated, and the Vocation Bureau of Boston, which Parsons organized.
7. Lincoln Filene, interested in the bureau from the start, sponsored it to employers, and also supported it financially.
8. Dr. Stratton D. Brooks, Superintendent of Schools of Boston, during the year following that in which the Vocation Bureau was organized asked for help for the schools, introduced vocational counselling into the Boston school system (1909), and thus launched the movement into the school systems of the country.

*What to do with the Bureau?*¹ With the death of Parsons, the Vocation Bureau of Boston seems to have remained quiescent for a period of more than six months. It is true that the class at the YMCA was carried on by Albertson and that this lasted into the early spring of 1909. Meanwhile Bloomfield had issued (undated but doubtless early in 1909) an eight-page pamphlet, *Speakers and Lecturers, on Subjects Dealing with Vocational Direction*. Thirty-one names were given with subjects for each. Two given by Professor Henry C. Metcalf of Tufts College are of special significance: "A College Course for Vocational Counselling" and "The Employment of Vocational Counsellors in Industrial Plants." The address given on this pamphlet is 101 Tremont St.; evidently an office separate

from Civic Service House was being maintained, even though Parsons' successor had not been appointed.

About this time Superintendent Brooks of Boston was asking for help in organizing counselling work in the Boston schools, particularly to assist in selecting those pupils who should enter highly specialized courses in industry and commerce in the secondary schools of Boston. It was at this point that the trustees of the Vocation Bureau met to select a successor to Parsons. It seems evident that they were looking for an educator, and Charles Zueblin recommended David Stone Wheeler, who was carrying on progressive methods of education in a private school at Lexington, Massachusetts. Wheeler was a graduate (1901) of Boston University and had already taught sciences at Cushing Academy, Ashburnham, Massachusetts.

David Stone Wheeler Succeeds Parsons. On June 19, 1909, Wheeler undertook his duties and with the co-operation of a committee appointed by the superintendent carefully planned a comprehensive series of meetings for the one hundred and seventeen Boston teachers who had been designated as counsellors. These meetings began early in the fall and included expositions of the educational opportunities in the various high schools and talks by a number of employment managers and others drawn from the industrial and commercial enterprises of greater Boston.

Boston in 1909. Massachusetts had but recently been having one of its periodical public discussions—this time on the advent of vocational education. One of the most interesting cities of America, Boston is by tradition classical but pioneering, cultural industrial, and conservative but humanitarian and progressive. Its many historic conflicts—abolition, religious reform and liberalism, experiments in education—had accustomed it to differences of opinion.

Vocational education came chiefly from Germany. In 1905 Governor William L. Douglas appointed a commission under

the charge of Carroll D. Wright, former United States Commissioner of Labour, to study the needs of vocational education and the practices in other states and in foreign countries. This commission recommended that studies in the school be bent toward industrial preparation and that a second commission be appointed to establish industrial schools in Massachusetts. Professor Paul H. Hanus of Harvard University was appointed chairman of the new commission; Lincoln Filene was another member. These two men travelled about the state speaking in favour of the work and hearing suggestions and criticisms from educators, employers, and labour union officials. They organized a separate board for vocational education, but by 1909 the need for an amalgamation was apparent. Professor Hanus proposed that the commission be abolished and merged with the work of the State Board of Education, but an arrangement was finally made to have a general resignation and reorganization. Consequently a new State Board of Education was organized in 1909, and David Snedden was made Commissioner, with Charles A. Prosser as assistant in charge of industrial education, Rufus W. Stimson in charge of agricultural education, and Charles R. Allen as agent for trade training.

A glance at these dates will reveal that in this same period Hanus and Filene became active in the work of Parsons. It must be repeated, however, that there was little direct connection between the two movements, the chief reason perhaps being the German influence in vocational training, which seemed to make inappropriate any kind of guidance based on self-determination for the child.

There seems to be no evidence that Parsons had any active interest in the movement for vocational education; there is evidence that Superintendent Brooks of the Boston public schools was one of the first to see the need for a connecting influence between the two.

Naturally there was strong opposition to the work of vocational education. Albert E. Winship, Editor of the *Journal*

of Education, was quoted in the *Boston Globe* on August 31, 1909, as strongly opposed to the organization of trade schools. "Boston is turning backward," was his way of protest, and "I sometimes wonder if Bunker Hill and Faneuil Hall are not better adapted to the Mississippi Valley if the Kaiser is to camp on Boston Common." Professor Hugo Munsterberg, in the same newspaper (November 17, 1909), expressed himself as strongly opposed to trade schools. He stated that boys and girls should not be allowed to choose their own vocations at high school age and, further, that the Vocation Bureau founded by Parsons should have at its head "a psychologist of worth." He repeated this last observation in an article in *McClure's Magazine*, February 1910.

The Boston papers were full of the discussion on vocational education and guidance. Some general impressions may be gathered from Lincoln Filene's book of clippings, kindly placed at our disposal:

Snedden going up and down Massachusetts addressing citizens on industrial education...Rufus Stimson advocating his idea of home projects in agriculture, and thus originating the idea latter known as the project method...James P. Monroe hammering away at the idea that we in America were "twenty-five years behind the times."...President Eliot stating that Germany began this work sixty years before...Strenuous debates on schools and colleges and their aims and methods...The argument to keep manufacturing in New England by training boys and girls...The money value of education, by Eli Weaver...Lectures by Paul H. Hanus...The Grand Rapids plan—occupational information through English classes.

The Boston 1915 Committee. A civic movement for the improvement of Boston, to culminate in an exposition in 1915, was started in 1906. (The outbreak of the First World War prevented the carrying out of the plans.) On May 3, 1909, Stratton D. Brooks, Superintendent of the Boston Public Schools, wrote to Edward A. Filene (brother of Lincoln Filene),

Director of the Boston 1915 Committee, asking if this committee would organize a bureau for the assistance of boys and girls in selecting high schools.² Filene promptly replied to Brooks, calling attention to the Vocation Bureau founded by Parsons, which however, was still without an active director. Filene stated that the trustees of the Vocation Bureau would be glad to submit a plan for active work with school children. This plan was drawn up and submitted, and on June 7, 1909, it was adopted by the school committee. It proposed the appointment of a committee of six masters and submasters as a "vocational direction committee," the appointment of a number of counsellors in the schools, and the training of these counsellors by meetings to be held under the auspices of the Vocation Bureau.

Beginnings in the Schools. It was at this time that David Stone Wheeler undertook the work as director. He drew up extensive plans featuring counselling, lectures to graduating classes, and industrial investigations. It is interesting to note that there was practically no provision in the plan for modification of school work, except that Wheeler stated that notebooks might be kept by students and that these could contain compositions on occupational topics.

On the basis of these plans the Vocation Bureau was re-organized on June 19, 1909, and work began in co-operation with the schools. During Wheeler's directorship a number of meetings of the committee were held.

Bloomfield Takes the Directorship of the Bureau. No report reveals why the directorship was changed, in November or December 1909, from Wheeler to Bloomfield, nor do we have the exact date. Typewritten reports give Mr. Wheeler's name as director as late as November 8, 1909, and the minutes of one of the October meetings of the trustees indicate a desire for modification of the activities of the bureau. At any rate, late in 1909 Bloomfield gave up his work as active director of Civic Service House (work that was thereupon taken over by Philip

Davis) and plunged full time into the work of the Vocation Bureau.

Mr. Wheeler, shortly after leaving the Vocation Bureau, entered training for the Methodist ministry and had charge of several churches, particularly one at Gloucester, Massachusetts. After a number of years in the ministry he became a teacher again and joined the faculty of the Watertown, Massachusetts, high school.

The Work of Frederick J. Allen. The development of the work, particularly in the Boston schools, indicated the need for printed material for the use of the school counsellors as well as for the bureau. For this reason an assistant director was appointed—Frederick J. Allen.

Allen, a graduate of Dartmouth College, had taught mathematics and history at Boston University and mathematics at Simmons College. About the time when the Breadwinners' Institute was organized at the Civic Service House, Allen began a significant kind of work with young men in Boston, a work that led him into contact with Civic Service House. He developed what he called at first the City History Club and later the Young Men's Civic Service Club of Boston. With very meagre support Allen organized, maintained, and supervised scores of clubs for the study of government and the practice of parliamentary law and debating. In this way he made a remarkable contribution to the civic welfare of Boston between 1903 and the time of his death in 1927.

In June 1910, Allen joined the Vocation Bureau as assistant director and investigator of occupations. He also participated in the counselling of individuals carried on at the bureau, in the preparation of manuscripts for publication, and in the work of preparing Boston teachers for their work in counselling.

Allen's first pamphlet was labeled *Bulletin No. 1, Vocations for Boston Boys*, issued by the Vocation Bureau of Boston: *The Machinist*. The outline of this pamphlet of ten pages is as

follows: the trade—its divisions, dangers, conditions and future; pay, positions, and opportunities; apprenticeship in the trade; the boy—qualities and training required; comments of people in the trade; comments from the state of Board of Health; census report figures; bibliography; and schools giving courses fitting for this occupation.

Allen proved to be a remarkable investigator of occupations, and his experience proves that a trained observer need not necessarily have participated in the work of the occupation. The details of his work will appear below.

The Work of the Bureau under Bloomfield. Our present intent is to emphasize chiefly the bureau itself.

In 1910 there was issued a short bibliography of "books and periodicals in English and German dealing with vocational direction." In 1911 Bloomfield issued his first book, *The Vocational Guidance of Youth*. It is general in its treatment, dealing with the choice of a lifework and its difficulties, beginnings of vocational guidance work in the Boston schools, the task of a counsellor, some cautions, and social and economic gains to be expected. The motto for the bureau selected by Bloomfield was "Find thyself, and the definition of vocational guidance was "organized commonsense used to help each individual make the most of his abilities and opportunities."

In 1911 a short course of ten lectures on vocational guidance was given by Bloomfield in the Harvard Summer School.

In 1911 also Bloomfield was asked to serve as special commissioner in the War Department for the Bureau of Education in Puerto Rico, and in 1912 he was vocational adviser to the Bureau of Indian Affairs. In that year also he turned aside to arbitrate a strike in the garment trades, a work which led to much effort in that direction later in his life.

In 1914 Bloomfield issued, through the United States Bureau of Education, *The School and the Start in Life*, a story of the beginnings of vocational direction in England, Scotland and Germany.

The Organization of the Employment Managers' Association.
One of the most important events with which the Vocation Bureau was connected was the creation of a new profession—that of employment manager or personnel director. Allen, in his investigations of occupations, had early met the men in charge of hiring workers, and by 1912 found that a dozen or more establishments had well defined officials called employment managers or employment supervisors. On the suggestion of persons we are unable to identify these men and others met for a discussion of their common problems, and in December 1912, a constitution was adopted under the name Employment Managers' Association. Thus the first such organization was formed.³

Not only did these pioneer personnel workers organize an association of employment managers; they also stimulated the execution of a plan to prepare them for their work. Beginning with the fall of 1914 a series of lectures on "The Function of Employment in Management" was arranged at the Amos Tuck School of Administration and Finance of Dartmouth College, Bloomfield being one of the lecturers. The following year the director of the school, Harlow S. Person, offered an elective course, "The Employment Function in Management." The announcement of topics shows how closely this guidance-in-industry project paralleled the work of vocational guidance:

An intensive study of the problems of management relating to the employment and supervision of personnel, the control of working conditions and the relations between employer and employee. The sources of supply of employees—public, trade, and commercial schools, vocation bureaus, employment agencies, etc.; classes of employees with reference to physical, mental, and temperamental qualifications for different kinds of work; classes of work with reference to

their demands upon employees; methods of hiring; general supervision; training during employment; promotion and transfer; records; discharge; control of working conditions—safety, health, recreation; employees' co-operative associations; wage systems; *esprit* and good will; qualifications and functions of the employment manager: associations of employment managers.

Add dashes of psychology, unions, and collective bargaining and we have a completely modern course. The work was continued, with the title changed in 1919 to "Employment Management."

Other universities early undertook similar work, especially under the stimulus of the production of munitions and other goods for the war.

Other Work of the Bureau. Meyer Bloomfield often told the writer that he realized the fact that he had little skill in the art of teaching; his writings also indicate his lack of connection with the school situation. Bloomfield did splendid work in spite of this handicap, but that it was a handicap no one who knew him could doubt. Repeatedly he spoke to conventions of teachers and school administrators about the need for vocational guidance and its social importance, but when asked for direct suggestions for the school he had few concrete proposals other than the organization of counselling. There was no suggestion for curriculum revision, nothing for changing manual training into exploratory and tryout courses, and no active connection between vocational education and vocational guidance. This is clearly shown in the second book published by Bloomfield, *Youth, School, and Vocation* (1915). There is considerable repetition of material used in former reports and in *Youth, School, and Vocation*. The sociological viewpoint is clearly set forth, yet little tangible material is outlined for the schools.

In spite of his lack of knowledge of the school, Bloomfield did good work in stirring up the school people themselves to

improved work in vocational guidance. The 1910 conference in Boston, described, suggested many connections with school work; moreover, Bloomfield's teaching of teachers in Harvard, Columbia University, Colorado College, University of California, and Boston University gave a start in new topics of thought to many teachers who later worked out adequate plans.

In 1912 an interesting magazine devoted one issue to vocational guidance. This was the *Boston Home and School News Letter: Vocational Guidance Number*. It was issued from No. 6 Beacon Street and the material was prepared by F. J. Allen, Bloomfield, and others. This may be considered as a forerunner of the *Vocational Guidance Bulletin*.

Meanwhile Allen was busy with the preparation of vocational pamphlets. The following fields were covered in rapid sequence, beginning with 1911: machinist, baker, confectioner, manufacturer, architect, landscape architect, grocer, department store, and banking. Allen also published three books: *The Law as a Vocation* (1913), *Business Employments* (1916), and *The Shoe Industry* (1916).⁴

The work of the Vocation Bureau in counselling and correspondence is summarized in Brewer's *The Vocational Guidance Movement* (1918). Gradually it was discovered that counselling can hardly be done by itself, since it is only one of a series of necessary activities. Nevertheless Bloomfield and Allen did much work of value for those who applied to them. Occasional reports of the Vocation Bureau, particularly those of 1913 and 1915, give a comprehensive account of the work.

Bloomfield Leaves the Work. With the entrance of the United States into the First World War, Bloomfield was invited to undertake work for the Emergency Fleet Corporation. He became chief for the industrial service department and served till after the end of the war. With the closing of the war work, Bloomfield opened an office as industrial consultant in New York City and was engaged for a number of years in a variety of activities. He organized a service of industrial reports which

spread the idea of conciliation into many industrial establishments. Three more books bore his name: *Labour and Compensation, Management and Men*, and *Preventive Management*. He continued his work as arbitrator and undertook much work also as an attorney—he had been admitted to the bar in 1905. In 1922 Mr. Bloomfield was sent by President Harding to Russia to study industrial conditions. His interest in vocational guidance continued and in 1929 he was appointed adviser to students and Professor of Vocational Guidance at the College of the City of New York. He was also adviser at Hunter College. In 1938 he passed away.

Good Foundations Laid by Bloomfield. If the test of a man's work depends on a number of pertinent criteria, Bloomfield's work will stand these tests and make his name an important and necessary one in the history of vocational guidance. First, he organized and carried on effective work with tangible and favourable results. Second, he put in writing, for the use of other persons, his ideas in the field of vocational guidance. Third, he secured the support of good men to sponsor the work he was doing. Fourth, he used a dignified and effective publicity for the spread of vocational guidance. Fifth, he helped to teach others how to do the work.

What became of the Vocation Bureau of Boston? In the fall of 1917, when Bloomfield entered upon his war work, the trustees of the Vocation Bureau of Boston made over the bureau, together with the services of Frederick J. Allen, to the Division of Education of Harvard University. The name of the bureau was now changed to the Bureau of Vocational Guidance, and Roy W. Kelly, then Principal of the High School at Fall River, was made director.⁵

The bureau undertook a variety of war work. In the first place, courses were instituted for the training of employment managers, and some of the recipients of this course did notable work in stores and factories during the war. Second, foreman training was organized, so that these officers could develop morale and efficiency among their workers. A third activity

was devoted to the vocational education of workers in factories. A fourth was related to rehabilitation and training of the handicapped; in co-operation with the Red Cross Institute for Crippled and Disabled Men a number of early bulletins were issued for the guidance of workers with handicaps—Burt J. Morris wrote most of these. A fifth activity was the Americanization work carried on by Charles H. Paull. Paull developed, with the co-operation of the Associated Industries of Massachusetts, a group of booklets describing and picturing common problems and processes in everyday work—for example, in the work of a paper-mill worker and employee in a tannery. Safety information was printed in red ink.

Simultaneously with all these special efforts courses in vocational guidance were carried on, and Allen and Kelly published a book on the shipbuilding industry, with particular reference to the war work.

In 1919 Dr. Kelly resigned to enter personnel work in California.⁹ John M. Brewer was made director. He also had studied under Professor Hanus and had published in 1918 *The Vocational Guidance Movement*. He had already taught one year at Harvard (1916-17), giving courses in vocational guidance and vocational education, and had spent the two war years in the Los Angeles Normal School, later the University of California at Los Angeles. Under his directorship the bureau emphasized work with the schools and a series of courses for the preparation of counsellors was organized.

The work at Harvard has resulted in nine books and many pamphlets by faculty and staff, eight published doctors' these (plus twelve unpublished) and eight other books and several pamphlets by students, besides numerous magazine articles. *The Vocational Guidance Magazine* was edited at Harvard, first by Frederick J. Allen (1922-27) and later by Fred C. Smith (1927-33).

The work of the Bureau of Vocational Guidance has been greatly curtailed in recent years, but the same functions were

gradually assumed elsewhere, first by the National Occupational Conference (1933-39) and later by the Office of Education at Washington and by the National Vocational Guidance Association.

NOTES AND REFERENCES

1. See sources given in the Appendix. The reader must be on the lookout for errors: one manuscript submitted for our inspection contained five major mis-statements within the compass of three pages, and the pamphlet issued by the International Labour Office is guilty of errors apparently based on nothing less than unrestrained imagination.
2. German influence had led to the organizing of specialized high schools in Boston—among them two trade schools, a school of practical arts, and a high school of commerce—and Dr. Brooks saw at once the difficult problem this situation presented to pupils in selecting the right school. It may be noted that as early as December 21, 1908, Lincoln Filene wrote to the School Committee suggesting visiting days as an aid in selecting a high school.
3. The date is wrongly given as 1911 in *The Vocational Guidance Movement*, by Brewer *Personnel and Employment Problems*, issued by the American Academy of Political and Social Science, May 1916, apparently contains the first literature on employment management. On page 111 the organization of the Boston association is described.
This work should not be confused with that of scientific management. Frederick Winslow Taylor (1856-1915) began his work in scientific management in 1879. He and his associates in the Taylor system have accomplished important changes in American industry, but they did not interest themselves in the problems of employment management until after the influence of the vocational guidance movement.
4. Allen's method of investigation included two steps chiefly. First, concentrated and long-continued observation of the workman. Second, questions of foremen and managers. He did his work in this last-named book so well that several foremen and managers told him that he had revealed to them many things about their industry that they had never discovered themselves.

The pamphlet, *Vocational Guidance*, part of the 25th Annual Report of the United States Commissioner of Labour, 1910 (1911),

contains the full text of some of the early pamphlets issued by the Vocation Bureau and other agencies.

5. Kelly had studied under Professor Paul H. Hanus, and in 1918 published his *Hiring the Worker*.
6. First with Roos Brothers in San Francisco, then with the Southern Pacific, and later in private practice. More recently he has served as personnel manager for the Home Owners' Loan Corporation at Washington, and since 1938 as personnel director for Lever Brothers, with headquarters in Cambridge.

Need for Vocational Education

"The wealth of the world is created by the work of skilled hands on raw materials."—Dwight D. Eisenhower

The economic and social well-being of any society is dependent upon the abundance of goods and services made available for its people. Here in America we have the highest standard of living of any country in the world. It has been estimated that with less than seven per cent of the world's people, we occupy but seven per cent of the land area of the world, yet we produce about fifty per cent of the world's goods and services. This ability to produce could be a major factor in the cold war against communism and in the survival of democracy. It is the basis for building the good life among our people. The present and prospective needs for and availability of skilled workers, the effect of technology and mechanization on the need for and training of skilled workers should be carefully studied by persons responsible for development of educational programmes if their schools are going to meet the needs of society.

Trends in the Supply of and Demand for Skilled Workers

We may first consider the broad classification of work engaged in by our civilian population. In 1950 the largest groups of workers were found in manufacturing, retail trade, and

agriculture (including forestry and fishing). Sizable numbers were also found in transportation, communication, and other public utilities; in professional and related services; and in personal and domestic services. These and other groupings are shown in Table 4.1. These data are important to consider since there is a fairly common misconception of these distributions. It is commonly thought, for example, that there is a much higher percentage of persons employed in manufacturing than the census data show. Actually, the percentage in mining and manufacturing markedly declined from 1919 to 1953. On the other hand, the number employed in the field of wholesale and retail trade tends to be underestimated by many. Actually, the percentage of the non-agricultural employees so employed increased from 17.4 per cent in 1919 to 21.2 per cent in 1953.

TABLE 4.1

**Major Industry Group of Employed Civilian Persons in the
U.S. by Percentages—1950**

<i>Group</i>	<i>Per cent</i>
Agriculture, Forestry and Fishing	13.7
Mining	1.5
Construction	5.5
Manufacturing	26.2
Transportation, Communication and other public utilities	8.1
Wholesale trade	3.8
Retail trade	16.3
Finance, Insurance and Real Estate	3.3
Business and Repair Services	2.2
Personal and Domestic Services	6.8
Amusement, Recreation and related services	0.8
Professional and related services	7.5
Government	4.4

As we consider the development of programmes of occupational preparation, we may note a different classification. Such a classification brings out the differences in degree and kind of skills involved in the occupational field, in a general way. Table 4.2 gives this breakdown as of 1940, 1945, 1950 and 1953. The assumption is that there should be some similarity between the kinds of opportunities for occupational preparation in the several fields and the occupational grouping within the labour force. The groups designated as labourers, both farm and non-farm, are largely unskilled groups, or at most semi-skilled. Likewise, the group designated as operatives and kindred workers largely includes persons engaged in repetitive work which can be learned in a relatively short time. The public secondary schools do contribute to the preparation of individuals for the group referred to as professional and semi-professional by providing college preparatory sequences. There are also some workers in other groups who are expected to have abilities strictly of a managerial type or of a highly technical nature for which the public secondary schools cannot provide occupational preparation, at the high school level. Some of this "vocational-technical education" can be provided by the community colleges. School programmes of vocational education could be provided, however, for most of the remaining members of the occupational groups.

One of the employment trends of this century often pointed out is the steady decline in the percentage engaged in farming. The total dropped from 31 per cent in 1910 to 21 per cent in 1930, to 12 per cent in 1950, and to 9.5 per cent in 1953. However, this must not be interpreted to mean that less emphasis could be placed on training persons for farming. The drop in percentage is due in part to the increase of the total labour force during that time. From 1940 to 1950 alone, the labour force increased from slightly over 57 million to nearly 65 million. In 1870 it was only 12.5 million. The actual number of persons employed in agriculture has not declined very much. The 6,448,343 farm operators of 1920 had only been reduced to 5,379,250 in 1950. This is a drop of less than 17 per cent, although the portion of the labour force engaged in agriculture

dropped 50 per cent. Much of the drop in the proportion of the labour force engaged in agriculture is in the farm-labour classification rather than in the farm-owner, tenant classification. Farm operators dropped from 15.5 per cent of the labour force in 1920 to 7.8 per cent in 1950, while farm labourers dropped from 9.4 per cent to only 4.1 per cent. Farm mechanization undoubtedly has been largely responsible for this decline in farm labourers during this period.

TABLE 4.2

Employed Workers in the United States Classified by Major Occupational Groups, 1940, 1945, 1950 and 1953 (Per cent)

<i>Major Occupational Group</i>	<i>1940</i>	<i>1945</i>	<i>1950</i>	<i>1953</i>
Professional, technical, and kindred workers	7.5	6.1	7.6	8.8
Managers, officials, and proprietors, except farm	8.3	8.6	10.9	10.0
Farmers, farm managers, foremen, and farm labourers	18.6	16.0	12.0	9.5
Clerical and kindred workers	10.4	13.0	13.1	12.7
Sales workers	6.5	5.0	6.6	6.0
Craftsmen, foremen, and kindred workers	11.2	12.7	12.8	14.4
Operatives and kindred workers	18.5	22.4	20.3	21.0
Service workers, except private household	7.3	7.7	8.1	8.4
Private household workers	4.9	3.3	3.3	3.1
Labourers, except farm and mine	6.8*	5.2	5.4	6.0

*Totals do not equal 100 because of rounding.

In general, it can be said that the proportion of the labour force classed as clerical workers, as well as those engaged in skilled trades and related occupations, has been increasing. It

will be noted in Table 4.2 that craftsmen, foremen, and kindred workers amounted to 14.4 per cent of all workers in 1953. The Office of Defence Mobilization cites three factors that have increased the importance of skilled manpower:

1. increase (over 3.5 million) in craftsmen, foremen, and kindred workers since 1940, an increase especially in the number of mechanics and repairmen;
2. a building boom, creating jobs for a million more in the building trades; and
3. increase in the number of foremen.

The office points out that these increase account for nearly 90 per cent of the increase in skilled crafts, 1940 to 1950. The proportion classed as unskilled workers has remained fairly constant, while the proportions designated as craftsmen and operatives have increased. The prediction of the number of persons who should be trained for a given occupation is not easy.

Attention is called again to Table 4.1 which shows 16.3 per cent of the labour force engaged in retail trade and 3.8 per cent in wholesale trade, or a total of 20.1 per cent in distribution. If the selling jobs included in some other categories such as finance, insurance and real estate, and business and repair services were added it would appear that about one-fourth of the labour force is engaged in distribution of good or in services. A source primarily concerned with education for this type of job estimates that 30 per cent of the labour force is so occupied. It points out that while population has doubled since 1900 and the greatest increase of any other occupational group for the ensuing 50 years was 250 per cent, the number of workers in distributive occupations increased by 577 per cent. That this is a field entered by large numbers of youth is also pointed out by one reporter who says that 130,000 youth 18-19 years old and 150,000 youth 20-24 years old enter employment in distributive occupations every year.

One of the characteristics of this century is the development of large-scale business and industry. Because of this development many school people gain the impression that employment in these large concerns is the likely destination of all graduates and drop-outs from their schools, and that because many of these large concerns train their own employees, the school need assume little responsibility in this regard. But while youth might find organized training for jobs available in some of the larger companies—located for the most part in heavily populated centers—we must remind ourselves that most business and industries are relatively small. This fact is pointed out very clearly by Churchill with data from the U.S. Department of Commerce showing trends since World War II.

Some 55 per cent of the 1945-51 over-all increase in employment was in [business] firms [of all types] with less than 20 employees... This group accounts for roughly 95 per cent of all firms and about one-fourth of all paid employment... The number of concerns with over 10,000 employees was about the same (240) in early 1945 and 1951.... Aggregate employment in these companies in 1951 was about 4 per cent lower than the 7.5 million persons employed during the war.... In 1951, three-fourths of the firms in business had fewer than four paid employees (roughly two-fifths of all firms had no paid employees at all) and less than one-tenth of one per cent employed 1,000 or more. . . . Firms with less than four employees constitute an important share of all operating business.

On January 1, 1951, there were actually 1,436,000 firms engaged in retail trade that were employing less than 4 persons each and 216,000 manufacturing firms employing less than 50 persons each. These constituted 89.2 per cent of all manufacturing firms.

The growth of the factory system brought into American industry large numbers of youth possessing little or no skill who were set to doing routine and repetitive tasks. One of the consequences of the trend was the reduction in numbers of

apprentices in skilled occupations. During this time the large-scale migrations from Europe brought many craftsmen to this country, thus making it unnecessary for employers to train their workers through the apprentice system. As a result, in the period from 1860 to 1930 the ratio of apprentices to journeymen markedly declined. Not until the passage of the Fitzgerald Act in 1947 and the inauguration of co-operative, school and employer apprentice training programmes was this declined and a real effort made to provide systematic training for apprenticeable trades. The number of registered apprentices rose from 21,000 in the 1940s to nearly 235,000 in 1949. In 1953 there were about 162,000 registered apprentices, in addition to a substantial number on unregistered programmes. Even so, the Office of Defence Mobilization in 1954 concluded that, "There are not now in training enough apprentices to replace during the next three years the losses through deaths and retirements of machinists, tool and die makers, molders, patternmakers, boilermakers and millwrights." It has been estimated by the U.S. Bureau of Apprenticeship, the Immigration and Naturalization Service, and the Office of Education that about one-quarter million new journeymen are needed annually to replace normal losses of skilled labour. Not more than two-fifth of these will have received some kind of formal training. Few employers can give broad experience and instruction in all aspects of a trade. Schools can supplement such experience and training as an apprentice might receive on the job.

The Dilemma of the Consumer in Buying Skilled Manpower and Service

A bit of reflection by the average person on the efficiency of people who produce for him, sell to him, or perform service for him would be quite revealing of the need for vocational education. The average salesperson in many a store is inefficient because he does not know the product he is selling or the interests and needs of the customer. He may not be familiar with production standards to which the merchandise has been

subjected. Merchandise may be graded with a system which he does not understand.

The dilemma of the consumer in finding trained auto-mechanics, radio repairmen, and other service persons is well known. The training of persons available for office positions leaves much to be desired. Exceptions, of course, can be cited. The range in skill of persons whom the average person hires for work is great. A study of the help-wanted sections of the daily newspaper will usually reveal many jobs requiring training and experience for which there apparently have been no applicants.

Although farmers are not hired directly and do not ordinarily sell directly to the consumer, the problem is similar. The range in ability is also present and is often very great. Some farmers are extremely competent as managers and as persons operating complicated machines and performing skillfully many other farm operations. On the other hand, many farmers are so low in proficiency that they may actually be operating at a loss. The only reason they continue may be that they are living on the land which they work on a subsistence basis. In one state, for instance, in 1951 the highest labour income among farmers keeping accounts in cooperation with the state agricultural college was \$20,564, while the lowest labour income was a loss of \$6,477! The productive man-work units—a measure of over-all farming efficiency—varied from a high of 2,097 to a low of 140. Farming is not a licensed trade or profession with fixed standards for entrance.

The Need for Food and Other Consumer Goods

The enormous natural resources of this country and the relatively small population have combined to dim the realization of the people that our capacity to produce might some day be insufficient to supply the needs of future increased population. Statisticians report that there is a net gain of one person to the population of the United States every 12 seconds. Whereas in 1940 the population stood at approximately 133 million, on January 1, 1955, it reached an estimated 163,900,000. It is

further estimated that if the population increase continues at this rate, by 1960 the total will be about 175 million. There appears to be likelihood that this increasing rate of growth will continue. The birth-rate rose from 18 per thousand in 1940 to 25 per thousand in 1952. All of the increase in population in the last few decades and the necessary increases of the future have, or will have taken place without any significant increase in arable land and other natural resources. In fact, these resources are being depleted at an alarming rate.

In the face of these facts and opinions, the percentage of the labour force represented by operating farmers fell by 1950 to a new all-time low of about eight per cent. And, as indicated in the preceding paragraph, these farmers vary greatly in their proficiency. Each operator is called upon to do a better, and a still better job in supplying food and fiber for more and more people. He must do this without depleting the soil upon which future generations depend.

The key to the problem of sufficient food and fiber for future generations is education in abilities needed by farmers. The fact that a shortage of food and fiber has not developed already is not alone due to development of synthetic fibers and to development and use of labour-saving machines in agriculture, but also to the ability to use newly discovered, efficient practices in production, management and marketing. The Office of Defence Mobilization points this out:

During the past four years farmers have increased production about 70 per cent with only 11 per cent more harvested acres and with 20 per cent fewer hours of labour.

Modern farm technology, however, required a higher degree of ability and operating skill ... any productive farm must maintain workers with management skill and a knowledge of soils, crops, fertilizers, pesticides, animal husbandry practices, and the mechanical ability to maintain and operate diverse types of machines and equipment.

An example of what might be accomplished through training is furnished by a record of accomplishment from the state of Mississippi which, in 1950, had the lowest per capita income of the forty-eight states. The state supervisor of agricultural education reports that 38,057 farmers had been enrolled in the institutional-on-farm training programme for veterans up to that time. He estimated the increased net farm income to these farmers from 1946 to 1950 as 150 million dollars, based upon farm account records kept by these farmers. During this time 10,033 farms had been purchased, over 9 million dollars' worth of building constructed, and 13 million dollars worth of repairs made to buildings. Many new practices had been adopted and yields increased. Comparable reports could be made for many other states.

The consumer goods, the purchase of which is made possible by such increased earning power, are and can be available only as machines and trained men and women are available to process and manufacture, and to transport and distribute them. These and other workers, farmers, and homemakers are dependent upon raw materials and "know how" to meet their needs for food, clothing, shelter, transportation, recreation, and other needs. Vocational education is a primary need of our society.

The Needs of the Home in Modern Society

The needs of the home and of homemakers are closely tied to trends of employment and to the economy of the country. The home has become more of a "consumer unit" than a production unit. This is in part due to the steady increase in the proportion of workers who are women. In 1900 this only 18.3 per cent. In 1930 it was 22 per cent. In 1949 it was 28.2 per cent. Furthermore, more than one woman of every five was working in 1950. The effect of all this on the home is apparent when we realize that from 1940 to 1953 there was an increase of ten per cent in the population of married women working outside the home. In April, 1953, one of every four married women was a member of the labour force. And of the women married in the 1930s and who 23 years later had children of high-school

age or older, one of every three was employed outside the home. In 1949 one of every four working women had children under 18 years of age. The proportion of women between 20 and 34 years of age in the labour force has declined, however, while the proportion 35 years and over has increased. The 1940 data show that women whose husbands were in the \$1,000 to \$1,500 wage bracket were twice as likely to be working as those whose husbands were in the \$2,000 to \$3,000 bracket.

The trend toward making homemaking a "part-time" vocation is just one of the many having an effect upon the stability and cultural contribution of the home in our modern society. The Mid-Century White House Conference on Children and Youth estimated in 1948 that "about two million children under eighteen years of age were living with neither parent, and nearly four million with only one parent." Broken homes are caused by many factors which will not be discussed at length here. But since the home is the most important institution in society it is pertinent to recognize the need for its preservation and strengthening. The function of the school is not to provide an antidote for instability, unrest, or frustration in the home. It is important that the total school programme be so organized as to develop constructively competences in home and family living. More than that, it is also important that instruction be provided for parents and future parents in specific areas of the homemaking vocation for their direct benefit and the ultimate benefit of society.

Some of the problems of the home to be dealt with in education become apparent as we note the thinking of leaders in the field of homemaking education. For example, Spafford, writing in a bulletin for administrators of secondary schools, mentions some of the problem area in homemaking:

Vocational programmes designed to prepare for home-making have an important part to play in secondary education. Such programmes should give major attention to human relationships, child development, child rearing, and the management aspects of homemaking. They should

deal with the complex problems which face young people in the early years of marriage and for which so few feel adequately prepared today.

More high school home economics departments need to face squarely the kind of education that will best fit young women, who will very soon be homemakers, wives, and mothers for their jobs. They are anxious to succeed at this job. The future welfare of society depends upon their success.

The details of the needs mentioned in the foregoing are many and varied. There is need for skills in family economics; in selecting, improving, beautifying, and keeping in repair the home itself; in caring for the ill member of the family; in operating and keeping in repair the many household appliances; in developing wholesome recreation and family relations; in selecting and preparing foods to meet dietary needs; and in selecting and keeping in condition the clothing of the family and many other related needs.

There has never been a time when homeworkers were more needed in our society than today. The demands upon the time of members of a family outside of the home, the complex and varied nature of these activities, and the rapid changes in the material components of the modern home all combine to make homemaking a most significant vocation and a major factor determining the future of our society.

Machines and the Work People Do

The development and introduction of machines in the home, on the farm, in the factory, in the stores and other places of business, and in trades and professions are well known. Many persons regard mechanization as the most significant single development of the twentieth century. Yet, in spite of this, there has been a misinterpretation of the effect of this trend on the labour force and particularly upon the need for specific vocational skills in trade, industry, and agriculture. The

machine is looked upon as a device to save labour, and, to be sure, it is primarily that. It is an error, however, to think that the machine displaces skilled labour or reduces the need for skilled labour, rather than unskilled labour. The fallacy of this interpretation will become clear as we look at the record.

A recent analysis made by the United States, Department of Labour, Bureau of Apprenticeship shows the trend of the male skilled labour force from 1910 to 1950. It will be noted from Table 4.3 that the male skilled labour force increased from 14.5 per cent of the total non-farm labour in 1910 to 18.6 per cent in 1950. The proportion designated as semi-skilled rose steadily

TABLE 4.3

Percentage of Male Skilled, Semi-skilled, and Unskilled Non-farm Labourer Groups in Each Census Year, 1910-1950

<i>Labourer Group</i>	<i>1910</i>	<i>1920</i>	<i>1930</i>	<i>1940</i>	<i>1950</i>
Skilled	14.5	16.7	16.4	14.8	18.6
Semi-skilled	11.2	13.3	14.4	18.1	20.1
Unskilled	18.2	17.7	16.1	11.4	8.5

from 11.2 per cent to 20.1 per cent in the same period, while the unskilled dropped from 18.2 per cent in 1910 to only 8.5 per cent in 1950. These statistics make it apparent that the need for occupational skills within our economy is increasing. The increase of the group of semi-skilled or routine workers has taken place at the expense of the unskilled rather than of the skilled labour. In an analysis of these same trends the U.S. Office of Defense Mobilization concludes:

The relative losses sustained by the skilled trades in earlier years, resulting from the introduction of mechanization in some industries and the breaking down of skilled trades in other industries, have been offset in more recent years by the

growing importance of the skilled repair, maintenance, and installation occupations.

Many examples could be given of machines that have displaced unskilled labour. The mechanical shovel, the mechanical ditcher, and other earth-moving equipment have released thousands of workers whose chief qualification was strength to operate a shovel or a scraper. Yet new skilled occupations emerged in the operation of these machines, in the servicing of them, and in the more technical jobs of designing and fabricating them. The mechanical beet harvester is eliminating the employment of transient, unskilled labour previously employed in the back-breaking work of lifting, topping, and hand-loading of sugar beets. The cotton picker displaces unskilled labour. Where unskilled labour is plentiful and cheap, the cotton picker has not become a common farm machine. But in areas where labour can obtain more profitable employment in semi-skilled occupations it has come into more common use.

The introduction of the machine does not generally reduce the total demand for workers but usually increases it. The horse and buggy produced a modest demand for blacksmiths, liverymen, and wagon-makers. But the numbers pale in significance compared to the automechanics, the service station operators, the automobile salesmen, and the thousands employed in the manufacturing industry. In contradiction to a popular conception that mass production reduces the demand for highly trained persons, America's pioneer and genius of mass production, Henry Ford, whose company, even before World War II, employed more than 15,000 skilled mechanics in addition to others directly engaged in the production of cars, said nearly two decades ago:

A cardinal principle of mass production is that hard work, in the old physical sense of laborious burden-bearing, is wasteful. The physical load is lifted off men and placed on machines. The recurrent mental load is shifted from men in production to men in designing...The need for skilled

artisans and creative genius is greater under mass production than without it... It has been debated whether there is less or more skill as a consequence of mass production. The present writer's opinion is that there is more.

An interesting example of the effect of the introduction of the Hollerith machine in the office of the U.S. Census Bureau in 1890 is given by Jaffe and Stewart. In 1880, 1500 clerks processed and tabulated the census returns by hand operations. By 1890 the population had increased 25 per cent. However, in spite of the use of the Hollerith machine the number of clerks employed to operate the machines in processing the data was actually increased by 100 per cent. This was because the job was all done in a shorter span of time, but for a greater volume of statistics involving many more types of analysis. In their summary of the effect of the "iron man" on the labour force, Jaffe and Stewart conclude that:

... for any given product, the immediate effects of a labour-saving invention generally is to reduce the skill level of the workers affected. In the long run, however, these less-skilled workers tend to be replaced by automatic machines. As a result the remaining working force tends to consist largely of skilled workers capable of servicing the machines which produce the products; these workers, however, have totally different skills from those of the original skilled workers, even when the ultimate product remain largely unchanged.

This conclusion is corroborated by Diebold, who has devoted a great deal of study to the theory of automatic operation and the process of making things automatic. He points out that this application of technology to industrial and business activity, which he calls *automation* "will not progress as far as the proponents of a completely automatic society have predicted and...the changes will not occur as quickly as most forecasters have led us to believe." In regard to the future demand for skilled labour he predicts that:

The work that will require the most manpower will be semi-skilled and highly-skilled maintenance and repair. Such work, although on a much higher level, is in most cases fully within the ability of the people who today work at the simple repetitive tasks of the assembly line, provided of course that they are properly trained and motivated....In addition to an absolute increase in future requirements for semi-skilled and highly-skilled workers the ratio of maintenance and repair workers to direct labourers will increase sharply during the next two generations.

The U.S. Office of Defense Mobilization also points out that:

In the early days the division of labour displaced the all-around craftsman in many manufacturing processes.... As a result [of automation], in some industries semi-skilled workers are being displaced by automatic processes, while skilled workers are being called in to keep this machinery and equipment in repair.

An illustration of the actual demand for skilled workers in business and industry is provided by a typical report of a State Employment Security Commission for a large metropolitan industrial city. On January 17, 1954, this agency reported that it had 1700 jobs for which workers were being sought by employers. This number was divided as follows: professional, 111; clerical, 515; skilled, 576; semi-skilled, 368; and unskilled, only 141. Under clerical they had listed stenographers, 89; typists, 92; general clerks, 52; book keepers, 15; comptometer operators, 15; and salesmen, 58. Skilled industrial workers needed included toolmakers, 50; maintenance electricians, 60; turret-lathe operators, 13; horizontal boring-machine operators, 22; auto-mechanics, 16; and construction industry form builders, 53.

Because of the mistaken notion that the machine has reduced the need for skilled and semi-skilled workers, many persons have carried their false reasoning further to conclude that most pupils in the secondary schools are destined to become workers.

at repetitive tasks requiring no school training and only a few hours of on-job training. We must recognize that large numbers of secondary school pupils will take jobs requiring little or no specific training. The proportion who will need to develop specific job skills, however—whether in school, on the job, or through a combination of school and job training—will remain constant or probably increase. The men and women who tend machines and perform routine or repetitive work need to become familiar with machine work and the handling of tools. They need to develop good work habits and understandings of processes of manufacturing and distribution. This will not be a specific type of vocational training. But if society is to be supplied with sufficient persons to do custom work, to perform individual services, and to service the machines, specific job training must be provided to more and more people before they enter employment. All indications point toward the eventual reduction of routine and repetitive activities of a low grade through development of more automatic machines. Such development should be carried on in order to free man for work which is more interesting and challenging, as Wiener says:

...any use of a human being in which less is demanded of him and less is attributed to him than his full status is a degradation and a waste...it is...a degradation to assign him a purely repetitive task in a factory, which demands less than a millionth of his brain capacity.

The Meaning of Increased Application of Technology

The introduction of improved machinery is only one change brought about by application of technology. New processes may also be the result. Technological developments will, in some cases, eliminate certain occupations and create new ones. For example, consider the long list of new jobs under radio broadcasting and radio manufacturing. The displacement of some workers by machines is being offset to a large extent by emergence of new occupations. As workers turn to new jobs a type of training will be needed which lead to considerable flexibility in skills.

In no occupational field is the increased application of technology more striking than in agriculture. In early days of this country about 90 per cent of the population was engaged in farming. Today the average person on the farm produces enough for himself and 14 others. Corn yields are 45 per cent higher now than they were forty years ago, in spite of soil depletion practices, but largely through adoption of improved varieties. The potato acreage is only about half what it was fifteen years ago, but yields today are twice what they were then. The hen of today lays fifty per cent more eggs than the hen of 1935. It is said that whereas in 1830 it required 58 hours to produce an acre of wheat, in 1954 it was being produced in less than two hours in the great plains; that an acre of corn which required nearly 34 hours to produce in 1855 can now be grown with four hours of labour. Another dramatic achievement of farmers through application of technology is detailed by one writer:

A short time ago the farmer figured that it took from 10 bushels to 12 bushels of corn to produce 100 pounds of pork. Today one-half that much corn plus 50 pounds of a high-protein concentrate containing the additional vitamins, minerals and antibiotics, will do the same job. Less than a generation ago it was considered satisfactory to produce a three-pound chicken in 12 weeks with 12 pounds of feed. Today we produce a three-pound broiler in 10 weeks with 9 pounds of feed, a clear saving of two weeks in time and one-fourth of the total feed.

In order for a steadily increasing population to continue to be well fed by a decreasing number of producing farmers on the same amount of land, a more rigorous application of technology is demanded. The phenomenal record made by agriculture to date would not have been possible without mechanization. Two examples of the extent of mechanization are the number of tractors and trucks. The number of tractors on farms increased from 240,083 in 1920 to 3,609,281 in 1950, a 1400 per cent increase. During the same period the number of trucks on farms increased from 139,169 to 2,206,670, more

than a 1400 per cent increase. More recent data show that from 1950 to 1953 the number of tractors on farms increased 185 per cent and of trucks 150 per cent. The number of grain combines on farms increased from about 4,000 in 1920 to about 900,000 by 1952. Electrification of farms has proceeded at a very rapid rate in the past two decades until at present nearly 90 per cent of farmers are now using electricity and in many states practically all farms have electricity for use on the farm and in the home. The use of electricity on farms is 10 times what it was in 1935.

One indication of the effect of mechanization on farming is given by an opinion poll conducted in 1952 by the Curtis Publishing Company. Replies to a questionnaire were received from 1,535 out of 2,030 of the nation's outstanding farmers. Asked to rank various factors contributing most to the advancement of their farming operations, 32.4 per cent named "improved farm machinery," 30.8 per cent "farm electrification" and 20.7 per cent "improved soil and water conservation." The operation, adjustment, and unspecialized repair of farm machinery and equipment involves mechanical skills which must be developed.

The impact of technology on other occupations is just as relevant, though perhaps not as spectacular. However, Diebold predicts further increases in worker productivity of goods and services through automation. Changes in construction occupations brought about by prefabrication, in service industries by mechanical manipulation of data in market surveys, and in agriculture by hydroponics are forecast. The development and use of new machines have modified the activities of the office worker and the store clerk. The development of plastic materials, synthetic fabrics, and other new materials increases the amount of knowledge which must be possessed by the person who is engaged in distribution to the people. This development also steps up the knowledge required by persons who are rendering direct services and who are using some of the materials resulting from this increased application of technology. All this has important implications for education in the schools.

Vocational Education and the National Defense

Ever since the great depression of the early thirties many people have periodically become concerned about a surplus of food and other commodities. They have sometimes become greatly concerned because there were a few million bushels of potatoes or other food allowed to go to waste. A close look, however, at supplies of food and other consumer goods in times of scarcity or plenty will show that a slight abundance need be reduced very little in order to create a noticeable scarcity. The per cent of surplus or the per cent of scarcity need not be great to be noticed. By the same token, abundance or scarcity can easily be exaggerated by the average person. It is important to realize this when considering our national defense. A switch from a cold war to a hot war or a rapid step-up of armed forces and military activity could quickly change a surplus into a scarcity. Our experience in both world wars bears this out. Although there was a scarcity of some commodities before Pearl Harbor, after war was declared virtually everything was in short supply, although practically no food or other consumer goods had been destroyed.

One commodity in which we became painfully aware of a shortage was skilled labour. We did not have enough skill to produce the needed food. We lacked welders, electricians, machinists, and carpenters as well as stenographers, mechanics, and nurses. We were at war with a country, Germany, which for years had maintained one of the most efficient systems of vocational training the world had ever known. The nation with the best trained manpower has a tremendous advantage in any conflict. And for some time the outcome of the conflict was in doubt. Not until a greatly stepped-up programme of vocational training financed and directed by the Federal government was well under way was there any assurance that this country would be able to produce goods and services needed to enable us to do our share of winning the war. Many people said that never again should this country, with its abundant resources, be caught in such an embarrassing situation.

Today this country is in a situation where long-range plans must be made for the defense of the free world against the forces of communist aggression. It has been estimated that more than 20,000 technically trained specialists per year will be needed for the army alone. The former U.S. Commissioner of education has been greatly concerned with the problem of supplying trained manpower sufficient for our needs:

Our long-term mobilization-for-defense programme envisages an economy capable of supporting a substantial armed force without sacrificing our normal living standards. American industrial strength rests now and will rest in the future largely on the skill of its workers and their ability to maintain a high level of productive capacity. As this capacity increases, the processes of production and business become more complex, a larger and larger number of jobs must be filled with workers possessing special skills.

All this underscores the urgent necessity of strengthening the present system of vocational education in our public schools.

This same conclusion was drawn two years later by the U.S. Office of Defense Mobilization after carefully analyzing available data from many sources concerning needs and the nature of training required:

The occupations most critical to the national security require extended periods of training. It is therefore essential that programmes of training be stressed.

In the event of an emergency, our resources of highly trained manpower will probably be the ultimate limiting factor in our capacity for mobilization. These resources would be adequate to meet all National security needs only if properly distributed between the efficiently utilized in military and supporting civilian activities.

The Congress undoubtedly had in mind the need for trained manpower resources when in 1954 it increased the Federal

funds for vocational education under the George-Barden Act by five million dollars. This was an increase of 26.6 per cent, the largest increase of this kind since 1937 when the George-Deen Act was passed.

Our society has a right to expect that its workers will acquire skills to apply to our country's abundant resources. It is increasingly being realized that by so doing our nation should be in a better position to defend itself against aggression and to preserve the freedoms which it cherishes. In addition to this goal of society, as detailed throughout this chapter, ours is a society that is characterized by a rapidly increasing population, a wide variety of occupations, swift changes in these occupations resulting from technological advancements, and a rising standard of living. School people and citizens should work together to formulate programmes for the development of occupational skills to apply to our resources and to help to bring into being the good life that is possible for everyone.

CONTRIBUTIONS OF OTHER AGENCIES

Beginnings by Social Agencies. Parsons began work in a social settlement and had other offices in a women's educational organization, an economic club, and a Y.M.C.A. Many such groups almost immediately took up vocational guidance, as newspapers carried the story across the country. Y.M.C.A.'s especially imitated Parsons' plans; those in Brooklyn, Boston, New York City, Minneapolis, Chicago, St. Louis, Philadelphia, and Pittsburgh were a few that organized bureaus.

In many cities private bureaus were organized on the plan of the Vocation Bureau of Boston, independent of any other organization. In New York, Chicago, Cincinnati, Seattle, Atlanta, and Philadelphia vocational guidance was organized and financed privately before the schools took over the work. An example is the Children's Scholarship League of Chicago, which was organized in 1911 and early offered educational and vocational guidance.

In New York City the Vocational Service for Juniors had its roots in the Alliance Employment Bureau of 1890, the Federated Employment Bureau for Jewish Girls of 1914, the Henry Street Settlement Vocational Guidance Committee, and other free, noncommercial employment bureaus.

In the early examples of the work in schools and settlements it was natural that a great variety of effort should manifest itself. This chapter will give a fragmentary account of such effort, supplementing earlier chapters in which beginnings in American communities were described, state and federal effort outlined, and the organization of a professional association recounted.

Guidance for Rural Youth. One of the earliest movements for educational and civic welfare is represented by the work of the Alliance for Guidance of Rural Youth. The forerunner of this service was the Virginia Bureau of Vocations, founded in 1914 by Latham Hatcher, then a professor at Bryn Mawr College. Later called the Bureau of Vocations, and later still the Southern Woman's Educational Alliance, it organized branches in Chicago (1922), in New York (1923), in Richmond (1929), the Chicago Junior Group (1929), the University of Chicago Group (1931), and a branch in Washington (1937). The Washington branch has the co-operation of government technicians interested in rural betterment. Its board of trustees includes men and women of large affairs from all parts of the country.

We have already noted the work of the Alliance in assisting or initiating the organization of guidance work on the country plan in North Carolina, Kentucky, and Tennessee, and its efforts for rural guidance within the national association.

During its first ten years the Alliance conducted various guidance activities for women in southern colleges. It completed a survey of the occupational interests of students in thirteen colleges, answered many requests for occupational information, presented in colleges explanations of occupations, and held

many interviews. Through co-operative arrangements with Goucher College, Iva L. Peters worked out (1925) a course in Social and Vocational Orientation of Women at William and Mary. At Duke University the Alliance assisted in setting up the student personnel department of the Women's College, and made a study of vocational opportunities for educated women in Raleigh, Durham, Greensboro, and Winston-Salem.

During the early period, too, the Alliance supplied the first women students to enter the schools of medicine, pharmacy, and dentistry in the Medical College of Virginia, founded a School of Social Work and Public Health, played an important part in establishing the national and Virginia federations of Business and Professional Women's Clubs, lead in defining standards of business training needed by the modern girl, and prepared a "Directory of Business and Professional Women."

After 1924 attention was directed to rural girls and boys, many of whom were making their way to the city. Thousands of young people and their problems were studied. Institutes in the form of round-table discussions were developed for training elementary school teachers in guidance. In 1936 the Guidance Institute at Less College, Kentucky, sponsored jointly by Breathitt County leaders, the Alliance, the National Occupational Conference, the University of Kentucky, and Lees College and staffed by national figures in vocational guidance, offered field work and credits for its thirty-three-day courses. At the five-day Pine Mountain Youth Guidance Institute held in 1939 in Harlan County, Kentucky, the topics covered were: the 4-H clubs, the Harlan County Planning Council, the Harlan Kiwanis Club, health, home economics, hobby clubs, juvenile delinquency, learning by doing, local leaders, out-of-school youth, the Packhorse Library, the Parent Teachers Association, recreation and leisure time, scouts, shopwork, the State Employment Service, tests, textbooks, the purpose of education, the United States Employment Service, and vocational adjustment. A quotation from the report follows:

In connection with the shopwork contacts provided by the

Institute much interest was shown by the teachers in such possibilities in an elementary school. A shop corner, with tools totaling in cost no more than seven dollars, was on exhibition. Simple chairs, benches, and a table made from hand-hewn lumber suggested useful possibilities.

Publications of the Alliance include *Guiding Rural Boys and Girls* (1930), *A Mountain School* (1930), *Occupations for Women* (1927), and *Rural Girls in the City for Work* (1930), by Latham Hatcher; and a number of reports and articles.

A Movement Initiated by College Students. A unique event in the story of vocational guidance lies in the organization of the Inter-Collegiate Vocational Guidance Association in 1917, under the leadership of Catherine Filene (now Mrs. Jouett Shouse), at that time a student at Wheaton College. The Association had as its purpose:

1. Stimulation of interest among undergraduates as to the work they could prepare for after graduation.
2. The issue of current information on new developments in women's work.
3. The establishment of a clearing house on occupational information for young people with an A.B. degree or equivalent educational background.
4. The holding of inter-collegiate conferences annually on college campuses to discuss with leaders in the business and professional world opportunities for the college trained girl.

Two such conferences were held at Wheaton, one at the University of Pittsburgh, and one at Cornell. In her book, *Careers for Women*, 1920 (revised 1934), Miss Filene included articles by over one hundred and fifty women on as many vocations.

The Work Grows into a Research and Service Institute. This organization as such terminated in 1925 and was the parent of

the more formal organization, the Institute of Women's Professional Relations, which began in 1929, with Professor Chase Going Woodhouse as director. Both organizations had private support. The latter, however, had in addition grants from the Carnegie and Rockefeller Foundations and the United States Government through the W.P.A. In 1934 research headquarters moved from the Women's College of the University of North Carolina to Connecticut College; branch offices are maintained in Washington, D.C., and New York City. Information on occupations for men and women is distributed, lectures and discussions are arranged, and tryout programmes of summer work for junior and senior college women are planned. The literature includes *Women's Work and Education*, an ably edited quarterly, directories and other service literature, and about a dozen studies including some on the newer occupations.

Bureaus for Occupational Information. We have mentioned earlier the work of the Women's Educational and Industrial Union of Boston. Another such institution was the Bureau of Vocational Information of New York City, begun in 1918; it published a News Bulletin on opportunities for women. In 1924 the director, Emma P. Hirth, and her assistant, Beatrice Doerschuk, issued their useful book, *Training for the Professions and Allied Occupations*. This bureau was a sample of many organized throughout the country.

Interest of Educational Organizations. From the earliest years of organized effort, the National Association of Secondary School Principals has from time to time issued reports and featured guidance in its programmes. Its recent Occupational Adjustment study is reported in the last chapter. Occasionally the *Annals* of the American Academy of Political and Social Science publishes vocational guidance articles; the *Psychological Abstracts* of the American Psychological Association has a vocational guidance department, and the National Committee for Mental Hygiene issues material on child guidance.

But it remained for the depression beginning in 1929 to arouse leading associations of educators to the need. With the

"product of the school" remaining idle for an average of more than two years after graduating without offer of work, with the success of the C.C.C. and the great activities of the N.Y.A., both for school and college students and for those out of school, attention became active. The Carnegie Foundation financed the National Occupational Conference, the National Education Association and the American Association of School Administrators organized the Educational Policies Commission in 1935, and the American Council on Education set up the American Youth Commission in the same year.

Each year the Educational Policies Commission, to help co-ordinate efforts in educational policy making, publishes a pamphlet, *Deliberative Committee Reports*, a digest of the conclusions and recommendations of national groups in the field of education during the year. The titles listed under "pupil personnel and guidance" in the 1936 report reads: Educational Counselling of College Students; Occupational Orientation of College Students; A Programme of Action for American Youth; The Health of College Students; Youth in European Labour Camps; Mental and Physical Development; Pupil Personnel, Guidance, and Counselling; and Child Development and the Curriculum.

In the words of one of the reports, education must face the following question:

What can and should the schools do to meet the unemployment problem that disturbs and baffles youth, to supply the vocational guidance appropriate to the tempo and characteristics of rapidly changing machine industries, and to familiarize pupils with the realities of the stern scene in front of them?

The conclusion that education, industry, and government must work together includes echoes of pronouncements made at the first national convention of the vocational guidance movement in Boston in 1910. Another report states that a

programme of general education for all citizens will undoubtedly involve changes in the secondary school curriculums in practically all aspects.

The American Youth Commission was formed of representative leaders in American life to "consider all the needs of youth and appraise the facilities and resources for serving those needs, plan experiments and programmes which will be most helpful in solving the problems of youth, and popularize and promote desirable plans of action through publications, conferences, and demonstrations."

The Commission favours part-time schooling in connection with part-time employment, and has undertaken many studies of vocational guidance by schools and private agencies, in order to formulate plans for the communities to follow. The Maryland Survey is an extremely important example of its work in guidance.

The Council of Guidance and Personnel Associations, through its constituent organizations, maintains many forms of vocational guidance. The American College Personnel Association, a clearinghouse on methods and literature employed in college placement and personnel work, interests itself in vocational counselling and placement of college students in part-time work and in the placement of college alumni. The National Association of Deans of Women maintains a vocational information center for its members. The Personnel Research Federation collaborates with the various types of organizations engaged in studying people and their occupations, and encourages research on vocational and professional opportunities, individual aptitudes, and improving working conditions and employer-employee relations. On the West Coast, the Western Personnel Service, a research and service center for nineteen institutions, stresses the study of college personnel work, the dissemination of occupational information to college counsellors, and vocational conferences.

The National Society for the Study of Education has from time to time issued yearbooks related to vocational guidance.

In 1924 the twenty-third yearbook contained a variety of articles under the title *Vocational Guidance and Vocational Education for the Industries*, and in 1938 the two separate annuals published were entitled *Guidance in Educational Institutions* and *The Scientific Movement in Education*. Other books have related to testing, classification, and various forms of educational guidance.

Special credit is due to the adventurous publishers of books in this field, who often accepted manuscripts unconventional in form and matter. Educational magazines likewise embarked on new seas in using articles describing experiments in guidance. Foundations frequently gave the new movement financial aid.

Independent Experiments in Vocational Guidance: Minnesota. The Minnesota Employment Stabilization Research Institute was organized in 1931. It studied unemployed persons to determine the cause of unemployment and employed persons to determine the characteristics of successful employment; it was judged that 48 per cent were unemployed for personal reasons. Since many who had never been employed tested high in occupational ability, it was concluded that in emphasizing training and experience employers were missing many valuable workers. The problem of business recovery was found to be that of providing not merely work but also guidance service to find the right work for each individual.

The point of view of the study is started in *Men, Women, and Jobs*, by Donald Paterson and John G. Darley (1936), on page 118:

By adding to the interview information tests of known validity we may choose a successful worker seven or eight out of ten times. An extensive research programme that combines job analyses and measurement is the foundation upon which selection and guidance can build a more stable working population.

Certain other findings follow:

...Of 235 men enrolled in commercial correspondence courses only 6 per cent finished their courses, indicating a need for guidance before persons enroll in such courses. Twenty-five to thirty per cent of 2,491 cases being individual problems in guidance, a need for adult guidance was discerned. Individual differences regardless of age are found to be more marked than age group differences, and early retirement tends to lower the morale of an organization as well as to provide the worker with a problem.

As a part of this programme, public employment offices in Minneapolis, St. Paul, and Duluth were increased to give service to seven different occupational groups of employees. The use of files in filling calls did away with office lounging. In two years 53,000 out of 124,000 applicants were placed. Because employers were served by this method of selecting applicants, their confidence also was secured. The number of private placement offices dropped from 75 to 38 in two years. The second year was one of testing. Adult guidance and testing was given to 500 persons from other organizations. Such useful work for adults reminds one again of the responsibility of the schools in anticipating some of the vocational problems.

The Adjustment Service of New York City. The central point in the work (from February, 1933, to May, 1934) of the Adjustment Service, directed by Jerome H. Bentley and financed chiefly by the Carnegie Corporation through the American Association for Adult Education, was the client-counsellor relationship. To this organization came 16,000 people, two-thirds of them single and three-fourths under thirty-five years of age. As a group they were above average in schooling and came largely from trade, service, and clerical occupations; most of them were unemployed. Candidates were tested with more than a dozen tests and then asked to return to be counselled; meanwhile the counsellors had an opportunity to study the data about each person. The counsellors were chosen from the unemployed on the basis of attitudes, interests, personal traits, and successful occupational experience, and

given six weeks' training. At first difficult problems were brought before a case board which met daily. Examiners likewise were chosen carefully, and were given a month's training.

Much educational and vocational counselling was given. About 12,000 persons were counselled, after having spent well over two hours being tested; the cost was about \$7.50 a person.

A questionnaire sent to a random selection of over 2,500 clients brought replies from almost four-fifths of them, of whom nearly 90 per cent were specifically helped, two-thirds in building morale and 85 per cent in making occupational plans. Over half had begun suggested educational or recreational activities, and one-fifth had been helped in their search for work.

A number of pamphlets described the various features of the work; one was a summarizing report. It recommended that adult counselling be not left to public employment offices, because of their emphasis merely on placement, to social agencies because they deal with individuals of lower economic levels whereas problems of adjustment are not peculiar to any one level, or to Y.M.C.A.'s or Y.W.C.A.'s because they tend merely to *add* guidance service and not to make it an integral part of the work and because they do not represent all groups in the community. For the present experimental stage, so the report states, adult counselling agencies should be under technical leadership privately supported (their sponsorship being determined by local conditions), and free to the unemployed and those unable to pay. Of the responsibility of the school for guidance the report concludes (1935):

Before the school can fully realize its aim of adjustment it must make over its curriculum, organization, and administration with that aim in view, and not merely add a guidance department to a programme that in operation often tends to defeat the purpose of the guidance.

The Rochester Athenaeum. The distinctive feature of the third programme, that of the Rochester Athenaeum and Mechanics Institute, is its curriculum planning, under W.W. Charters and others, and its fusion of guidance with instruction. In 1928 the Institute, which had for nearly a century been providing education not offered by the public schools or the University of Rochester, began a study to discover the best types of positions for which to train its students. The result was a classification of occupations so grouped that common techniques would prepare for several and a curriculum which prepared for supplementary as well as basic jobs. Each student's programme is built around the core curriculum and revised from time to time as growth in objectives takes place; to a considerable extent each student works at his own rate of speed, sometimes by himself, again in a group. The departmental supervisor is his counsellor; thus guidance and instruction are in close relation to each other. Nearly all of the seven hundred day students are enrolled under a co-operative and alternating work-and-study plan whereby classroom work is supplemented by actual business experience; students in pairs exchange places each four weeks.

Similar Work in Other Cities. Stimulated by the above experiments, a number of other places organized similar counselling effort. At Cleveland, Donald E. Super, Edward H. Loomis, Joseph S. Kopas, and a number of other persons from industrial and educational institutions organized in 1936 the Cleveland Guidance Service. Dr. Bentley, Dr. Kitson, and Mary H.S. Hayes assisted in the organization of the Service, and the work was merged three years later with the National Youth Administration, Personnel Department, for the State of Ohio.

In Cincinnati and perhaps other cities similar work was organized in connection with placement. At Providence, in 1935, the Rhode Island Institute for Counselling and Personnel Service was set up by twenty-six local agencies. Tests at costs were provided, both for individuals and organizations, including stores and factories.

Work of Religious Organizations. From the first, the Y.M.C.A.'s have performed guidance activities. Ever since their beginning in 1851, like the young men's associations of the day they have offered educational classes. Undoubtedly these classes influenced the vocational adjustment of those enrolled. In 1893, 343 young men were enrolled in Dayton, and there is a record of their occupational status in relation to their choice in ten subject fields. In 1896, 314 associations reported subjects taught; Chicago was offering fifty-five courses. In Fenn College, Springfield College, and similar institutions good personnel work has developed. Twenty such institutions gave major attention to guidance in 1931; three issues of their bulletins were devoted to it.

Student intercollegiate religious conferences were largely vocational in import, many having been formed by those preparing for the ministry. (See Clarence P. Shedd's *Two Centuries of Student Christian Movements*, 1934.) Missionary service as a career was the theme of the first Northfield conference in 1886, the influence of which has lasted to the present, and of the student volunteer movement from its first quadrennial convention in 1891. "It is my Purpose, if God permit, to become a foreign missionary," awakened vocational interest in the minds of others besides those who subscribed to it. Between 1910 and 1920 *The Will of God a Man's Life Work* (1909) by Henry B. Wright of Yale, with its four "touchstones" by which one might find that "form and place" of life work intended for him, was influencing students to choose to be ministers; while R.H. Edwards was formulating *A Christian's Fundamental Life-Work Decision*, with the aim of encouraging students to choose definitely occupations through which they could give social and Christian service in business or other callings. In 1916 he established a Students' Summer Service Group "for social exploration, seminar, and vocational guidance experience."

During the early months of 1920 the Interchurch World Movement organized in many colleges a programme of guidance for life service, under the supervision of Jesse B.

Davis. This work was shortly discontinued, but it paved the way for other effort in several colleges.

At the Lake Geneva conferences of 1925 and 1927 and at Blue Ridge in 1928 and 1929 guidance and counselling were offered to students and a seminar was open to college faculty and administrative officers to acquaint them with guidance principles and practices.

Guidance of employed boys, directed by C. C. Robinson of the National Y.M.C.A. Staff after 1909, took the form of filling out an information blank modelled on one Frank Parsons had used, followed by an interview with a person successful in the field of interest indicated. Robinson's "Chart of Vocational Tendency" in his book *The Find Yourself Idea* (1922) preceded the conclusions of Strong and others concerning interest clusters and profiles. About 1932 Robinson went to Honolulu; there, advocating better vocational guidance for boys, he worked through the Y.M.C.A. and taught at the university. Meanwhile Eli Weaver had directed the efforts of the "Y" toward the vocational adjustment of soldiers returning in 1919. Well-planned guidance programmes were instituted at Brooklyn, in Hamilton, Ohio, and at Los Angeles between 1925 and 1929. Joseph V. Hanna established a counselling service at the West Side "Y" in New York in 1928. In Cincinnati, under C. E. Lee, lay counsellors from industry and the professions co-operated with the schools in a revised form of Robinson's plan; in 1927-28 this group, including the president of the University of Cincinnati and certain of the professors, gave a week-end to a "coaching conference" on vocational adjustment problems; at Cornell and some other institutions similar seminars have been held. The Cleveland Y.M.C.A. introduced radio talks and skits about 1935; Donald E. Super of the staff directed work similar to that under Bentley in the Adjustment Service. Since 1927 the Brooklyn placement programmes have included group guidance and testing.

During the depression of 1929-1940 a number of interesting plans developed, especially for older workers. Sidney W. Edlund started a "Man Marketing Clinic" in New York City

in 1935; the plan spread to fourteen cities. Three years later Roland Darling began in the Boston Y.M.C.A. a "40 Plus Club" which placed talented men by the "sale" of one individual through the efforts of another; this scheme spread to thirty-two places. (See *Monthly Labour Review*, April, 1940). V. L. Gerfen at Cleveland has done similar work; he developed one of the first Job Finders' clubs of the depression, using testing, coaching, "group job research," and clinic. In 1938, 564 Y.M.C.A.'s reported 35,752 different placements. The Boston Y.M.C.A., the Massachusetts State Employment Service, and N.Y.A. were in 1937 conducting a comprehensive programme for unemployed youth between eighteen and twenty-five. Groups of fifty were spending three months each in a programme including testing, counselling, study of occupations, survey of community and employment trends, and how to discover and secure suitable employment. Seventy per cent placement with satisfactory adjustment was reported.

Characteristic of a number of associations dealing with youth are the testing and counselling services maintained by the Boston Y.M.C.A. and Y.W.C.A. A number of cities duplicate such work. The Boston Young Men's Christian Union, co-operating with the Y.M.C.A., maintains the Downtown Forum Counselling Service for young men already at work who are seeking promotion.

Other Religious Organizations. Members of the Y.W.C.A. attend the quadrennial Student Volunteer conventions and summer conference to which reference has been made. In the cities likewise the Y.W.C.A.'s have paralleled the Y.M.C.A.'s in placement and other guidance activities. At the Boston Y.W.C.A. placement was carried on from 1866 to 1928, a period of sixty-two years. A sewing school dated from 1875, and a cooking school from 1880. Since 1928 the vocational guidance department has been counselling without direct placement; there are about two hundred counselling interviews a month. Similar work has been done in other cities throughout the country.

Likewise, the Y.M.H.A. and the Y.W.H.A. have done guidance and placement work for their members. Several Jewish organizations do some form of guidance work. The B'nai B'rith Hillel Foundation in Washington, D.C., aims to guide young people in their occupational choices; in New York the Council of Jewish Federations and Welfare Funds, established in 1932, has one of four committees on vocational services and studies employment and vocational agencies in the Jewish field; and the Jewish Welfare Board, the federation of youth-serving organizations, engages in vocational education, guidance, and placement. The Cleveland and Chicago organizations carry on active and intelligent work. Also the Hebrew Sheltering and Immigrant Aid Society, established in 1911, with approximately seventy-five thousand members, helps immigrants to obtain employment. Work for refugees has recently become important.

The Catholic Youth Organization, Chicago, interests itself in guidance and employment services. The Columbian Squires, under the Knights of Columbus, and many of the other Roman Catholic organizations which include young people among their members have programmes to train youth to meet the new problems of modern industry.

The National Council of the Protestant Episcopal Church through its department of religious education is fostering the study of young people's occupational problems. At a ten-day summer conference for youth sponsored by the Episcopal Church in 1930 a course in vocational guidance was offered. The Friends' Service Committee, American, established in 1917 maintains work camps for young men and young women and places people in volunteer social service, as well as maintains a rehabilitation programme. Undoubtedly many Sunday School teachers, in efforts to assist young persons in solving their problems, have been called upon for vocational as well as other forms of guidance, and pastors of churches have often engaged in guiding vocationally.

Activities of Professional and Labour Organizations. A history of the American Association of University Women, by Marion

Talbot and Lois K. M. Rosenberry (1931), gives a remarkable story of educational and vocational guidance. Organized in 1881, its founders, Emily Fairbanks Talbot and Ellen H. Richards, envisioned a plan by which young graduates would offer helpful counsel to girls still in school and college. Opportunities for training were discussed in 1883, and professions for women in 1884 and in many subsequent years. A leaflet of 1892 explained the association's Bureau of Occupations, which functioned for four years. In 1909 a Committee on Vocational Opportunities was created, with Elizabeth Kemper Adams as chairman. An interesting article in the association's April, 1913, *Journal* analyzed three hundred replies to a questionnaire regarding salary, training, mode of securing position, qualifications needed for success in occupation, advantages and disadvantages, the best equipment for the occupation, and the best mode of entering it. A 1913, publication, *Vocational Training*, a classified list of institutions training educated women for occupations other than teaching, is a 137-page bulletin arranged alphabetically by occupations and by institutions and courses under each.

The association and its branches have contributed to the extension of guidance in numerous ways: guidance for war work, vocational conferences, financing child guidance (Washington, D.C., 1923), state guidance programmes, surveys for schools, follow-up studies, and the publication of numerous books, pamphlets, and articles. During 1937-39 two hundred and seventy-four branches reported projects in educational or vocational guidance, or both.

Through the influence of Lincoln Filene the University Club of Boston in 1926 organized a Vocations Department, directed by Stanley C. Lary. His conferences and counselling at the club and visits to colleges helped several of these institutions to improve their services in guidance.

The National Federation of Business and Professional Women's Clubs, organized in 1919 and numbering over sixty thousand individuals, studies the professional advancement of

women, opportunities in various fields of work, and the progress of women in their vocations. It aims to increase the employability of business and professional women and to extend their opportunities for employment through education and proper vocational adjustment. Under Frances Cummings, later president of the National Vocational Guidance Association, a number of vocational pamphlets were published.

Specific professions all have organizations; e.g., engineers, pharmacists, nurses, dentists, authors, teachers, social workers, clergymen, librarians, and the like, which take an interest in recruiting new members of the profession. The American Occupational Therapy Association, organized in 1917, with a membership of a thousand, provides information regarding centers, gives advice about the occupation, makes surveys and recommendations in particular fields, and maintains a placement service for trained therapists. The Engineers' Council for Professional Development publishes studies to attract others to the profession, encourages its members to co-operate with public schools in guidance, and tries to help young graduates to enter the profession. The American Association of Social Workers, established in 1921 and now numbering over nine thousand members, aims through its Division of Employment Practices to establish satisfactory conditions of employment and retirement, as well as to distribute information concerning social work as a profession.

Similar activities have been carried on by employers and employees. The 1910 convention of the American Federation of Labour endorsed the movement for "vocational direction." Studies have been made, several at the time of the war in 1918, under the Advisory Commission of the Council of National Defense formed by employers, labour, and education, on subjects of vocational guidance import. The work of the unions has been to enable persons through collective action to secure placements in industry under adequate wages and satisfactory conditions. The New England Office Managers' Association and the national organization have engaged in

vocational guidance and employed vocational guidance techniques in an effort to better industrial conditions.

At Washington the Society for Personnel Administration was organized in 1937, following the interest of the government in setting up personnel offices. The National Association of Manufacturers has for many years issued material related to vocational guidance, particularly in defense of the private enterprise system. Likewise the National Safety Council's materials relate to guidance.

We cannot attempt to give even a sketch of the history of personnel management, nor of the gradual discovery that methods of real guidance are effective in stores, offices, mines, and factories as well as in schools and colleges. A truly professional agent, the personnel manager, will gradually take his place as a member of the board of managers of every progressive firm.

Specific professional associations very nearly control, directly or indirectly, the education and admission of new entrants into their occupations: law, teaching, nursing, medicine, dentistry, engineering, the clergy, music, and others; there are obvious disadvantages in this situation, as there are in the high fees and other hurdles set up by the labour unions.

Service Clubs. Numerous country-wide organizations, among them Rotary, Kiwanis, the Lions, Quota, Zonta, and Altrusa, have assisted vocational guidance work in their communities by providing speakers and by co-operating with the schools. Rotary, the Lions, and Kiwanis have often done placement work.

In 1926 Kiwanis International adopted as an objective the encouragement of "the interest of all Kiwanis clubs in providing vocational guidance for young men and women." Since that time the practical business and professional experience of the members has been drawn upon in giving information about various occupations to interested young people. Interest in this

activity has grown steadily, and considerable explanatory literature has been prepared to guide members in their guidance activities. The *Kiwanis Counselor's Handbook* was prepared.

to assist Kiwanis vocational counsellors by outlining the essential elements of counselling and some desirable procedures of helping youth and adults to find a place in occupational life to which they may become well adjusted.

In it counselling is explained, a list of fourteen qualifications of counsellors is given, and a fourteen-point statement of important things to be observed in the counselling interview is presented. In 1938 nine hundred and eighty-four clubs carried on vocational guidance activities.

In 1931 the secretary of the Oakland Lions' Club reported co-operative activities with other clubs in the city during the preceding year, 1,000 youths having been placed, 3,000 interviews held in the office, 1,200 youths followed up, on their jobs, and 1,400 conferences held with employers at their places of business. In Norristown, Pennsylvania, a co-operative plan entered into by Rotary, the Lions, and Kiwanis led to a boys' organization, "Rohiwanis," for guidance.

Rotary International does specific vocational guidance training, placement, and youth counselling through its clubs.

Zonta interests itself in the welfare of girls and women in business—especially older women. Before 1931 its vocational guidance activities included talks in schools, advising individuals, and publishing occupational pamphlets.

The Altrusa Clubs in 1936 reported among their activities supplying speakers, providing scholarships and loans, working with other organizations, surveys, hobby enjoyment, and placement. *Current Notes on Women at Work*, a survey, was made under Altrusa of Boston by Florence Jackson, Wellesley Vocational Consultant, after its use in the Boston Public Schools and Radcliffe College had been assured. New York

Altrusa studied the employment of older women. Still another study was of occupational opportunities in Wisconsin.

Welfare Organizations. In earlier chapters there are many references to activities on the part of social and civic organizations. Since several recent investigations of youth show that their most insistent problems are those of occupational adjustment, it is but natural that family case workers, charity organizations, and scholarship committees early found it needful to offer vocational guidance.

Problem girls and those of moderate mentality engage the attention of the New York Vocational Adjustment Bureau, founded by Mrs. Henry Ittleson in 1919 and directed by Emily T. Burr. It serves more than a hundred social agencies, correcting psychopathic tendencies through vocational and other forms of guidance; also it is a training centre for graduate students of Columbia University. Some of its practices have been adopted by the schools. It has published about a score of pamphlets on its work and findings.

In Boston, aged women and others are given encouragement, guidance, training in power-machine sewing, and placement in the Community Workshops directed by Hazel Newton. This agency had been established in 1877 as the Co-operative Workrooms.

The Association for Improving the Condition of the Poor in New York employed in 1931 one case worker trained in vocational guidance for boys and girls. The National Federation of Settlements (founded in 1911) has a department of unemployment and social security. Morgan Memorial and its branches are constantly busy with guidance. The Salvation Army activities include employment. Two organizations give vocational help to discharged prisoners: the Society for the Friendless, Kansas City, Missouri, with sixteen state organizations, includes employment-finding among its activities; and the Osborne Association, Inc., of New York aids discharged prisoners in making their occupational adjustment.

The National Child Labour Committee and its state branches have continuously interested themselves in vocational guidance.

Guidance for the Handicapped. Many private agencies provide guidance for the handicapped. The American Association to Promote the Teaching of Speech to the Deaf advises vocationally and maintains an employment bureau for the deaf. The American Society for the Hard of Hearing gives vocational advice. Vocational guidance activities of the American Foundation for the Blind include research in educational and vocational opportunities, and scholarships are offered for a limited number of promising students with satisfactory vocational objectives. The National Society for the Prevention of Blindness gives suggestions and guidance in choosing an occupation. The Braille Institute of America (Los Angeles) advises by correspondence, does placement work, and publishes in Braille books written to promote vocational rehabilitation. All of these organizations, except the first, have been founded since 1908.

The National Rehabilitation Association (1925), numbering fifty thousand individuals, has national and state programmes. About 25 per cent of the cost of rehabilitation is borne by private agencies, the rest by the government. The Shut-in Society, founded in 1877, with about seventy-five hundred members, provides correspondence on ways to earn (among other topics) and materials for handiwork. Modern sanatoriums for tuberculosis have in recent years used forms of vocational guidance, including aptitude tests, to enable patients to find their places in occupational life. The National Tuberculosis Association has published a handbook (1941) on testing and counselling.

Organizations for the Negroes. The National Urban League of New York City (founded in 1910 and numbering twenty-two thousand members in 1939), which exists "to further the industrial advancement of the Negro," seeks better employment opportunities as a means of improvement for urban Negroes. Its periodical is *Opportunity*. In 1939 its Department

of Industrial Relations published a vocational guidance bibliography compiled by Ann Tanney-hill. The organization has sponsored many Vocational Opportunity Campaigns. The Congress of Colored Parents and Teachers, a more recent organization already numbering over twenty-five thousand members, has a committee on vocational guidance. The activities of the Association of Colleges and Secondary Schools for Negroes (Concord, North Carolina) are chiefly of a vocational guidance nature.

Fostering by Parents and Voters. The Parent Teachers Associations, both national and local, have very often expressed interest in vocational guidance, and have actively supported action by boards of education. Likewise the League of Women Voters has regularly included guidance on its favoured list; branches have often maintained committees to study and further its organization in local, county, and state areas.

Organizations Parallel to the Schools. An effective long-continuing scheme of guidance—indeed, one resembling county plans—is that organized with the Y.M.C.A. as the center at White River Junction, Vermont. In 1907 Archibald C. Hurd, who had been connected with naval Y.M.C.A. work at Brooklyn, went to Vermont and began handicraft classes (before 4-H clubs) and, in 1909, vocational guidance for boys and girls in nearly a score of high schools in three countries of New Hampshire and Vermont. A teenage survey, help to rural schools, vocational forums, conferences between successful workers and youth, visits to schools, colleges, farms, and industrial establishments, and thousands of counselling interviews, both at the central office and at the schools, characterize the work.

A number of clubs for youth, most of them founded since 1908, develop handicraft skills and in some instances business experience. Junior Achievement (1919) with a membership of four thousand, has its purpose developing ability to do simple handicraft work and learning actual business procedures connected with the making and marketing of these things. Combining manual skills and managerial skills in one organization

is a distinct departure from the public school's manual training activities.

In 1909 there was a Grand Rapids Junior Association of Commerce, sponsored by Jesse B. Davis, for giving to the sons of members of the senior association an opportunity to know the industrial interests of the city. The boys spent Saturday mornings listening to a brief talk by the director and then visiting one of the factories or business houses of the city.

A leader of these organizations, the Boys' Clubs of America, was organized in 1906 mainly for underprivileged boys. Usually there is a club building with gymnasium facilities; about half the clubs maintain summer camps. Some maintain directors of vocational guidance, and many have group work in occupational information. (*Vocational Guidance for Boys*, by Robert C. Cole [1941], gives a good account of such work.)

The most far-reaching of these organizations is the Boy Scout organization founded in 1910 and numbering over a million boys, including the junior organization of "cubs" eight to twelve years of age. Through the system of merit badges the boys are encouraged to learn about various occupations. Many of the activities are of exploratory and tryout value.

The Girl Scouts (1912) for girls ten to eighteen years of age, and the "Brownies" for girls from eight to ten, already a group of about 400,000, engage in many homemaking activities and arts. The Camp Fire Girls (1911) engage in homecraft, handicraft, and business pursuits. Active participation is encouraged in a wide variety of occupational activities (there being some seven hundred to choose from), the successful accomplishment of each being rewarded by an additional bead to wear at meetings. This group, with the younger "Blue Birds," now numbers over 232,000 individuals. The Girls' Service League of America (1908), reaching more than 1,000 individuals, aims to provide vocational guidance for girls sixteen to twenty-one years of age.

Many state Y.M.C.A. committees conduct Hi-Y clubs and camp activities for boys. In larger cities there are day and night

classes in vocational and cultural subjects. Employment agencies and vocational guidance service are widely maintained. The programme of the Girl Reserves, a Y.W.C.A. organization of teen-age girls, includes economics and the development of skills. Aid is given in acquiring techniques that will provide hobbies for adult years, some of them yielding an income. Employed girls under eighteen years are given particular attention; girls of foreign parentage and Indian girls in reservation schools are reached.

Other such groups include the 4-H clubs with their emphasis on agriculture; the Catholic Boys' Brigade of the United States, which has a programme of instruction and camping; the Sons of the American Legion, which gives occupational instruction under the guidance of older members; the Junior Red Cross, which stresses health and has a strong life-saving swimming programme; and the junior division of the Jewish Welfare Board. The Boy Rangers of America for boys eight to twelve years of age, leads to scout and other organizations. The masters or "guides" are responsible for the lodges, which engage in handicraft, especially crafts of the Indians and early pioneers. The Pioneer Youth of America, established in 1924 for boys and girls of eight to sixteen years, is sponsored by labour organizations and includes among its leaders members of the faculty of Brookwood Labour College. The activities of the membership of about one thousand adults, working in New York and Philadelphia, Durham and Marion, North Carolina, Lynchburg, Richmond, and Roanoke, Virginia, one West Virginia county, and Arkansas, provide camping, craft work, and industrial trips.

In addition to the tryout experiences afforded members of these organizations, the relationship between the young people and their guardians or guides forms a background for vocational counselling and guidance.

Voluntary enterprise by official organizations is indicated by the extensive work in guidance carried on by certain urban

police departments and also by fire departments. One or more city police commissioners are systematically endeavouring to train a group of patrolmen for counselling work and to inaugurate testing, counselling, placement, and research. The police of Sydney, Australia, have carried on excellent work of this sort. Little co-operation by school departments is thus far indicated.

The Future Farmers of America (1928) and Future Teachers of America (1937) are important examples of professional organization among beginners in occupational service.

Various child guidance foundations, the Judge Baker Guidance Center (1917) of Boston and the Bemis-Taylor Foundation (1929) of Colorado Springs, for instance, are arising to meet the needs of youth who are not provided for by other organizations.

College fraternities which sponsor vocational guidance include Alpha Tau Omega, a national organization of whose Vocational Advisory Board Harry D. Kitson is chairman, which does effective vocational guidance and placement work for its members; Mortar Board, a national honour society for college women, whose personnel committee outlines a programme of occupational information and vocational possibilities; and Phi Delta Kappa, a professional fraternity in education whose *Education Abstracts* regularly includes information on guidance.

Many Other Organizations. We had hoped to conclude this chapter with a list of the nation-wide voluntary organizations which in one way or another are interested in and fostering vocational guidance. But our collection grew unwieldy in size, with over two hundred names. The list includes societies related to the following interests among others: educational, religious, youth, business, professional, labour, agricultural, the handicapped, civic, fraternal, social, charitable, financial.

In 1931 C. C. Robinson quoted the *New York Telegram* in

stating that over \$125,000,000 a year is spent by the American public on soothsayers and fortune tellers. By way of contrast it is encouraging to realize that so many constructive efforts as those mentioned above are being made to help Americans to plan their lives wisely, and to safeguard and support the movement for vocational guidance in schools and colleges.

History of Vocational Education in America

Attitude up to the Passage of the Smith-Hughes Act

Ten years before the passage of the Smith-Hughes Act the American Federation of Labour joined the movement to obtain Federal aid for vocational education.

Among the new forces which entered the movement the American Federation of Labour was one of the most important...

Through the activity of the national labour organization the movement took on new vigour...The Federation of Labour began an active campaign...In April 1910 the Senate Committee in charge of the [Davis] bill had hearing on it. These were managed by Arthur E. Holder, of the American Federation of Labour.¹

The American Federation of Labour at its annual convention in 1907, 1908, 1909, 1910, and 1911 passed resolutions favourable to industrial education, and in 1908 authorized the appointment of a special committee on industrial education. . . . The 1912 convention of the

Federation expressed its approval of the Page bill in the following terms:..."Much time and attention has already been given to this bill by the president of the American Federation of Labour, as well as by the legislative committee, and considerable hope has been expressed for its ultimate success."²

Here are sources outside the Federation itself which reveal the active sponsorship that organized labour assumed in the infancy of vocational education. The motives of organized labour in thus lending its influential support to the movement are well known. Foremost among them was labour's traditional zeal for education, particularly for making it available to all children. Another important factor was labour's preference that agencies of concern to the general welfare be conducted under public auspices. Labour regarded vocational education as a reasonable adjunct to the public school system; it found undesirable the growing practice of private trade and vocational schools which were operated for profit and often without regard for the educational well-being of the students, their future in industry, or their development as citizens. The position of the American Federation of Labour is shown in a letter of March 22, 1912, from the then president, Samuel Gompers, to Honourable Carroll S. Page:

The position of the American Federation of Labour is so well-known in reference to vocational education that it ought to be unnecessary to further present its views. However, as you are actively and earnestly engaged in an effort to secure the passage of the Page-Wilson vocational education bill, drawn upon similar lines as was the Dolliver-Davis bill, which latter was acceptable to the organizations of labour, I desire to assure you that the American Federation of Labour desires to give every assistance within its power to secure the final enactment of this legislation.³

Speaking before the Commission on National Aid to Vocational Education in April 1914, Grant Hamilton, legislative representative of the American Federation of Labour, testified;

... the American Federation of Labour, which I represent here, is in favour of industrial education . . . We believe that the United States should cooperate with the states in establishing a system of industrial education . . . We necessarily and naturally are more interested in the boy or the girl who wants to learn a trade, and we would like to have them educated along particular lines. . . . We are in favour of the agricultural colleges, and their extension work. We are in favour of universities, and, in fact, every system of education that gives to the various sections of our society an opportunity to become educated.⁴

After the testimony of Mr. Hamilton, Senator Page, a member of the Commission, said to him:

You have been very strong factors, I know, in pushing this fight for Federal aid for industrial education. You have been exceedingly good abettors and active workers on that line, and I look upon you as great friends of this measure.⁵

The 1907 convention of the Federation declared that it favoured:

... the best opportunities for the most complete industrial and technical education obtainable for prospective applicants for admission into the skilled crafts of this country . . . to the end that such applicants be fitted not only for all usual requirements, but also for the higher supervisory duties, responsibilities and rewards. . . .⁶

The next year the convention with considerable prophetic discernment was pointing out two roads which might be travelled toward industrial education in the United States:

There are two groups with opposite methods, and seeking antagonistic ends, now advocating industrial education in the United States. . . . One of these groups . . . [would] educate the student or apprentice to non-union sympathies and prepare him as a skilled worker for scab labour and

strike-breaking purposes. . . . This group also favours the training of the student or apprentice for skill in only one industrial process, thus making the graduate a skilled worker in only a very limited sense and rendering him entirely helpless if lack of employment comes in his single subdivision of the craft. . . .

The other group is composed of great educators, enlightened representatives of organized labour and persons engaged in genuine social service, who advocate industrial education as a common right to be open to all children on equal terms to be provided by general taxation and kept under the control of the whole people with a method or system of education that will make the apprentice or graduate a skilled craftsman, in all the branches of his trade. . . .⁷

The special Committee on Industrial Education, reporting to the 1909 convention, favoured the establishment of public industrial schools in which:

The course of instruction . . . should be English, mathematics, physics, chemistry, elementary mechanics, and drawing. Shop instruction for particular trades, and for each trade represented, the drawing, mathematics, physical and biological science applicable to the trade, the history of that trade, and a sound system of economics, including and emphasizing the philosophy of collective bargaining.⁸

It is clear that the support which organized labour gave to vocational education, was constructive, consistent, intelligent, and unremitting. Organized labour experienced a sense of triumph with the passage of the Smith-Hughes Act in 1917. Free public education had always been the godchild of the labour movement, and it now saw the benign influence of public education being extended to the industrial field.

Collective bargaining as a subject in the school curriculum was not beyond the hopes of labour. Labour leaders had fought

for public control of the dawning system of vocational education and their hopes were high that its social worth would be demonstrated.

Changes in Attitude

Eighteen years later the convention of the Metal Trades Department of the American Federation of Labour was found giving its assent to a resolution which stated:

The intent of the Smith-Hughes Act has not always been carried out, but there have been many abuses in the use of the funds given by the Federal Government to the States, since these tax funds have, in many instances, been given to schools located wholly within private industrial plants and operated in a manner which seriously affected wage earners, not only tending to overcrowd certain skilled trades, but in other ways to lower the prevailing wages in these skilled trades, thereby increasing unemployment as well as lowering standards of living. . . . [At a certain] school for Apprentice Training which is operated for the benefit of . . . [the industry] with not much thought given to benefiting Apprentices . . .

Beginners, learners and helpers are given a short course . . . which has resulted in the lowering of wages in these particular trades.

Apprentices . . . are trained in these schools and put to work . . . at wage rates much lower than those prevalent for that particular operation . . . while skilled workers in these crafts remain unemployed.

It is neither just nor reasonable that public funds should be used to maintain training schools for the exclusive benefit of a particular employer.

There are similar abuses in similar trades and industrial arts schools throughout the country.⁹

A proposed resolution submitted to the 1935 convention of

the American Federation of Labour considered the question in this language:

[We] . . . deplore this misuse of taxpayers' money and call upon the President of the United States and the Honourable Secretary of the Interior, to immediately cause to be investigated all Vocational Training or Trades Educational Schools located within private industrial plants and to withdraw Federal funds where abuses exist.¹⁰

A similar resolution stated:

Several glaring instances have come to light during the past year where private employers through the cooperation of local, state and Federal educational authorities have secured the services of productive labour at no cost by using funds designated for vocational training. . . .

Private industry is taking advantage of this situation to train surplus workers in the public schools thus avoiding the customary expense of "breaking in" new help; . . .

What the country needs today is not so much training in mechanical skill as instruction in meeting the economic and social problems which confront the masses and how to meet the situations which arise as a result of the disappearance of skill in industry; . . .

. . . a proper and just programme for organized labour to substitute for the present inadequate and socially desirable system of vocational training now in force; . . .¹¹

In 1936 the Committee on Education of the American Federation of Labour reported to the convention that:

. . . in recent years American labour has become increasingly disturbed by the manner in which Vocational Education has been administered and the funds expended.¹²

The 1937 report of the Executive Council of the American Federation of Labour stated:

Severe criticism has been directed toward the administration of vocational education because in many instances it permitted the control and purpose of vocational education to become an adjunct to the employment and management divisions of big corporations. This meant that instead of workers being trained for the purpose of making them efficient and to develop ability in performing work for which they were peculiarly fitted, they were merely required to acquire special skill and speed in certain jobs.

So serious and so widespread were complaints against the administration of vocational education that the President created a commission to investigate before the increased appropriations of the George-Deen Act should become effective. Even before this inquiry had been finished a powerful lobby became active for the purpose of increasing the appropriation for vocational education by ten million dollars over the four and one-half million dollars recommended by the Bureau of the Budget. The Appropriation Bill for the Department of the Interior passed both Houses of Congress with an amendment adding ten million dollars to the four and a half millions recommended for vocational education. The American Federation of Labour opposed this amendment.¹³

The report quotes in full the statement made by the President of the United States when he signed, "with much reluctance," the bill appropriating the increase and comments on it as follows:

The President is to be commended for his determined insistence in refusing to be forced into unsound educational expansion. His statement of the situation and the forces at work affords confirmation for the Federation's wisdom in opposing this increasing in appropriation. There is no other teaching force or funds available for such expansion. In addition, the administration of vocational education is still in the hands of those responsible for the mistakes of the past—mistakes which bring into question educational leadership and integrity.¹⁴

In presenting this report to the 1937 convention the Committee on Education stated that:

Your committee further would express the conviction that until such time as the administration of Vocational Education in this country can give clearer evidence of its concern for the general public welfare, that the American Federation of Labour will withhold its full and hearty support.¹⁵

In September 1936, President William Green wrote:

It is such educational projects where so-called co-operative relationships have been set up between the schools and the industry that unsatisfactory results and even scandalous situations have developed where the educational development of the individual has been forgotten in an effort to help industry reduce its cost of training its work-force. Labour questions the validity of public expenditures for this type of education. . . .

It is high and opportune time to think through the fundamentals of vocational training and its relationship to the whole of education.¹⁶

In January 1937 Henry Ohl, Jr., President of the Wisconsin State Federation of Labour and labour member of the Federal Board for Vocational Education, stated:

The labour movement has another objective, at least quite as important as that of giving supplementary instruction to practical experience on the job; namely, preparing youth for the inevitable hazards and pitfalls when they enter industry. The latter phase in the education of our young people has not been included in the curriculum of the vocational school. . . .

Many of the schools the country over, as I know them, are not yet sufficiently uninfluenced by those with motives other than the welfare of the craftsmen of the future. Until they have become fearless in the face of controversial questions they are not competent to undertake the job of guiding America's youth. . . .

... the tragic part ... is the expected [sic] use of the vocational school for a short course to prepare cheap labour in place of men and women left without jobs in the town the company had deserted ... The point is that when educators fail to see an economic hazard in these cases, or, seeing it, ignore its magnitude, or when they are timid in the face of pressure, they must not be permitted unaccompanied supervision over youth. . . .¹⁷

Less objective is the statement of John Edelman, Director of Research for the American Federation of Hosiery Workers, His organization has been harassed and embittered by abuses under the vocational education system. *The Philadelphia Record* of January 18, 1937, carried this item describing an accusation made by him:

Sweatshop employers dominate vocational education activities of the United States Department of Education, it was charged yesterday at the closing session of the Worker's Education Institute in Philadelphia. . . .

Its whole concept of vocational education is to provide cheap and contented labour for industry.

Reasons for Dissatisfaction

The change in attitude was not a sudden development, but had been growing for 20 years. Many leaders of organized labour feel their cause has been betrayed by vocational education. One sadly says: "We thought we could trust the educator."

The very evils which labour had foreseen as appendages of the system when left to private exploitation have been foisted upon the publicly supported system. Organized labour has been repeatedly ignored, its counsels disregarded, and its interests subordinated to purely private interests.

For the purpose of this investigation questionnaires were sent to State Federations of Labour, central labour unions,

building trades councils, and local unions, asking for information on their experience with vocational education.

The following points of view were expressed by labour-representatives:¹⁸

Ogden, Utah: As vocational training is handled by our local School Board and the Chamber of Commerce it has been a big farce and labour conditions mean nothing to them.

Atlanta, Georgia [this indicates a situation existing in other Southern states as well]: The administration of Federal funds in vocational education has been very unsatisfactory in the states during the recent years. . . . We have secured a revision on the Federal requirements for use of Federal funds. These restrictions for various reasons have not been put in operation as effectively as we had hoped.

Boston, Massachusetts (Building Trades Council): We have not been favourably impressed with the school training, that is academic and shop work, and favour related training, that is school work and job work.

Boston, Massachusetts (Electrotypers' Union): I do not believe vocational education has worked out (or can) satisfactorily in this State, for the reason that very few graduates can be placed . . . with the result of loss of real education for the balance of the pupils for whom positions cannot be found. . . .

Employers' Associations are very much interested in creating an oversupply of help and having a supply of cheap labour always on hand. I believe history of Vocational Education will show certain employers have advocated vocational training to have City, Town, State, or Government take off their hands school they were operating . . . and that they have been active on committees advocating Vocational Training under the guise of fitting youth for industry (which in many cases had large lists of unemployed) and to pass on to the Vocational Training the costs of training apprentices . . . which costs, the industry itself should absorb . . .

Vocational training does not give pupils any understanding of problems of industrial organisation, social or economic problems. In fact the very set-up prohibits this, as it is the interest of employers' associations, who are interested in getting a cheap source of help, who keep vocational education going. Vocational training is advocated by those either misinformed or to create a surplus of labour or to pass on to someone else the cost of training apprentices, which properly belongs to industry. Valuable educational time of the pupils is wasted.

Altoona, Pennsylvania: We have an Educational Committee but an effort is made to keep labour from being represented. Appointments of this kind are made through the Chamber of Commerce and the School Board and the first knowledge we have of any activities is after the meeting. Recently when we had a member of labour on one of these committees the meetings were called at a time when a working man could not attend.

Pupils seem to come out with the theory that if you work cheaper you will get the job. [Vocational education] should be taken out of the hands of industrial and commercial bodies who exploit it and school boards who are controlled by those interests.

It would . . . be better to teach the theoretical part of a trade in school . . . and leave the practical experience to training learned as apprentices in actual employment under a craftsman.

Minneapolis, Minnesota: Union Labour, as such, has very little, if any, voice in the programme . . .

As to the attitude [of those] handling vocational . . . education towards union labour's efforts to maintain union wages and working conditions, I will say that they have in the main shown an indifferent attitude. . . .

Our school authorities have no knowledge, as far as we know, what the actual needs of the trade are. . . . None of the pupils are given, as far as I know, any understanding

of industrial organization and social and economic problems. . . .

I think there is an over-emphasis on the need for vocational education, when that term is used to cover everything. Some employers have discovered that there may be a lack of a waiting list at their gates and they are shouting for trained employees. They have evinced no interest for years in apprenticeship training or co-operating with our skilled craft organizations in carrying on such apprenticeship training. . . Apparently [these employers] are now calling upon the government or somebody, some place, to train men for their particular needs. . . .

Our movement in Minnesota, by and large, is fearful of vocational or apprenticeship training about which it is not consulted, and the rules governing the same have no relationship to the problems of that particular group of workers.

Cedar Rapids, Iowa: On the whole, vocational training has had little effect on labour. No credit is given students [by the union] in the printing courses, if they choose printing as a vocation; they are required to go through the regular course of apprentice training prescribed by the Typographical union. The same, according to my information, is required of students in the other courses.

However, there have been a number of complaints. In one instance, a student in sign writing did a window sign for 75 coin, the real value of which was between \$4 and \$5, according to the scale of prices in effect for such work here.

Labour's attitude here has, so far, been one of tolerance. It insists on training its own apprentices, and is jealous of any attempt with promises interference with that course.

Little Rock, Arkansas: The two principal trades taught are printing and automobile mechanics. . . . when graduated [the students] have only a meagre knowledge of the trade and can only secure employment in a country shop or some underpaid non-union plant.

... the meagre attempts that are now being carried on are injurious to both the students and the craftsmen who have served an apprenticeship and are upholding the standards of workmanship.

Los Angeles, California: With reference to how much voice labour has in vocational programme, I am of the opinion that we have very little, if any, outside of our committees on apprenticeship training. . . .

With reference to the attitude of those handling vocational education toward maintaining union standards and conditions, I am of the opinion that while they voice sentiments favourable to us along that line, the actual practice of persons taking up vocational education have not been in the best interest of maintaining our wages and standards. . . .

The labour movement as a whole in this district, in my opinion, looks with grave suspicion on vocational education because of its lack of regulation and lack of restrictions placed upon persons following these courses who, many times, obtain just one portion of a particular craft or trade and then become a drag on the market so that they are obliged to work for a whole lot less than the standard enjoyed by the competent, skilled union person. . . .

... employers in this district as a whole do not cooperate with the schools to see that the pupils training in a trade is carried out except those bona fide apprentices, the majority of whom are controlled by their respective trade unions necessitating the required number of years apprenticeship before graduating to a journeyman, whose conditions and wages are always controlled by the union.

I am of the opinion that training has not been effectively related to the actual needs of the trade but is mostly based upon arbitrary figures, arrived at through some agency or other who feels that there will be a shortage of mechanics and are crying to high Heaven about the need for building tradesmen particularly, in this area, a theory to which I am opposed and with which I do not agree as, in my opinion,

there will be no shortage in this district for some time to come, due to the natural turn-over of building tradesmen who are intermittently employed from time to time and as their jobs finish they must seek employment on other jobs and take a chance that an opportunity is there for employment. . . .

Frankly I do not see how pupils could be trained for a particular trade during their school term . . . actual practice, skill and knowledge must be obtained on the job. . . .

I am further of the opinion that there is an over-emphasis at the present time, caused of course by the recent depression, on the need for vocational education. . . .

. . . I feel there is a hysterical move on the part of a lot of people who found out that one certain class of employees were able to sustain themselves by hook or crook by reason of the fact that they had a vocational trade during the last depression and whose idea is now to flood vocations and trades with a lot of so-called trained people which would just reverse the conditions . . . to what they were in the years from 1929 to 1934.

I am further of the opinion that there is an overemphasis, at the present time, on vocational education. I feel that there is a hysterical move on the part of a good many people crying to Heaven that there is a shortage of mechanics, a theory with which I disagree. There will be no shortage of men in this district for some time to come. Due to the intermittent nature of building trades operations, all men might be employed at a given time, but as the jobs finish, they must again seek employment.

An inquiry was made into the trade schools of Connecticut, which received Federal aid. The unions complained bitterly about "the unfair competition of these schools, the anti-union attitude of the whole outfit, with the instructors and boys working on outside jobs, while good mechanics with families walked the streets."¹⁹

The Secretary of the Connecticut State Federation of Labour States:

The manufacturers have completely dominated the whole school programme. We have long tried to get a voice in it but to no avail. The State board of education is hostile and the trade schools throughout the State are simply used for the employers' benefit. . . .

Our State Federation opposes these trade schools. At the last session of the legislature we defeated appropriations for any more of them.²⁰

Time and time again I have gone to the State Board of Education, to the Commissioner of the State Board of Education and even to some of the members, with complaints and requests that the procedure be changed. . . .

It has been the policy of the trade schools in this State in the building trades industry to take contracts at figures that Union contractors could not compete with. . . .

This whole principle of trade school training has been contrary and just opposite to the principle of apprenticeship inaugurated by employers in years gone by, and maintained by Labour Unions. We have set up the principle to employers of approximately one apprentice to five mechanics. Trade schools have one supervisor and a dozen or fifteen apprentice boys, and they certainly can't get the proper training.²¹

To check the claims of the union officials, a visit was paid the State Director of Vocational Education in Connecticut. In response to the question, "How do you meet the unions' claims of unfair competition?" his reply was, "We have little or no contact with the unions. Thirty per cent of our students' time is spent in school, the rest on the jobs. We take only enough outside contracts to keep the instructors and the boys busy. We get the regular price that the contractors get."²²

An instructor in the plumbing department of the Hartford Trade School stated that about 85 per cent of the boy's time is

spent on outside work, at least for the last two years.²³ The State Supervisor of Trades and Industries stated that "about 50 per cent of the student's time is spent on outside work."²⁴ A pamphlet describing the State vocational education programme says:

Approximately 70 per cent of the student's time is spent in the special shop of his trade on work of a productive nature. The remainder of his time is divided between mathematics, science, and blueprint reading and such training in civics and English as will make him a useful citizen.²⁵

The State Supervisor stated that, "The small contractors have complained more than the unions. Recently, we had a meeting of these contractors and tried to show them that they are not being harmed."

The boys receive no pay for their labour and the instructors are paid by the State, so such schools can easily underbid any competitor.

There is a plant training programme in Connecticut. On December 1, 1936, this programme, the State Supervisor stated, had about 400 enrollees. He expected this number to double in the next two years. The pamphlet describing this programme states:

Where no state trade school is located in a town or near enough to render the attendance of employees possible, special arrangements may be made under which a trade school instructor may be sent to the plant and classes established...This type of instruction particularly fits the needs of the plant since it is based entirely on operations carried on in the organization.

Work of this description is being carried on at the Bigelow-Sanford Carpet Company in Thompsonville. For the past several years, trade school instructors...have come to the plant and operated classes in theory and shop practice, using the company equipment. The men taking these courses

are given training on regular plant machinery, carrying the manufacture of rugs through, from the raw material to finished product....

Another illustration of special courses operated by the state trade schools in an industrial plant are the classes in automatic screw machine operation. . . . These classes were for employees of the plant or any others who wished to attend....

There is a flexibility in the trade school organization that will enable it to offer training outside its own school buildings. Service may be brought to plants practically anywhere in the state if industries are in need of such assistance. Inquiries should be addressed to the Bureau of Vocational Education, or to the state or local manufacturers' or employers' association.²⁶

With few exceptions the attitude of the unions toward vocational education is one of defense against its abuses. Where labour is strongly enough organized, it curbs the worst evils, it insists on running its own apprentice programmes, and it accepts, and apparently tolerates as a commonplace, the failure of the educational system to consult with labour or to utilize its experience and co-operation.

Some States have been wise and far-sighted enough to secure the full confidence and participation of organized labour in their vocational policy. The results of such a policy are shown in a letter from the New Jersey State Building Trades Council.

Without exception the attitude of those persons handling vocational education in New Jersey is favourable to union labour and to the standards of wages and working conditions that organized labour strives for....

Yes, . . . vocational education has worked out satisfactorily in New Jersey. . . .

No training is provided in the part-time or evening

schools that has not been supplementary to a daily employment. . . .

In many instances employers cooperate with schools, and with Labour, through advisory committees, to see that pupils' vocational training is complete.

Vocation training programmes in New Jersey have only been instituted after careful surveys, usually participated in by Labour. This scientific approach has made it possible to have the training related directly to the actual needs of the trade involved.²⁷

If organized labour fails to revive the optimism and enthusiasm it showed in the years up to 1917 and if it now conceives its duty to be that of protecting itself against the abuses of vocational education, its attitude is understandable. The factors which brought about the change in the attitude of organized labour may be summarized as follows:

Failure to encourage or allow labour participation in the development of the programme.

Disregard of the apprentice method of training and, hence, creation of substandard craftsmen.

Failure to balance trade training programmes to personnel needs of the industry, thus creating an artificial surplus.

Disregard of proper labour standards as to wages in placing trade school students and graduates.

Unconcern as to whether such placements displaced adult workers.

Domination of many vocational training systems by "chiseling" employers.

Participation of the vocational training system in strike-breaking activities for fugitive employers.

Complaisance on the part of educators toward the use of Federal funds to train new sources of labour for migratory industries.

Training workers under so-called vocational education plans for mere routine processes.

Permitting student employees to work on a production basis without wages.

Encouraging boys to go into trade courses to the detriment of their general education.

Lack of co-operation with union apprentice training programmes.

Failure to supply trade extension classes for union journeymen already employed and seeking to keep abreast of technical changes in a trade.

Susceptibility of vocational educators to employer propaganda, such as the cry of labour shortage, without regard to the real facts as to shortage or whether the schools can actually do anything about it, or whether another depression will hit us before the "shortage" could be met.

Failure to give trade school students any instruction on subjects which would prepare them for a proper understanding of industrial life.

Inculcation of anti-union propaganda and fostering of employer-dominated philosophies that tend toward company unionism, such as seen in movements such as the Future Craftsmen of America.

Present Attitude

Typical attitudes of labour are as follows: One comparatively small group feels that labour is adequately represented and consulted on the programme in some States and is satisfied that vocational education is operating at least inoffensively. A second and by far the largest group is that which is completely disillusioned, and which feels that its duty is merely to protect labour against the abuses and evils of the vocational education system, and otherwise to leave it severely alone. A third group believes that a complete change in attitude and practices from

top to bottom in the vocational education system is necessary if labour and the public are to be protected from present abuses. This group also believes that the first step in such a reform is a change in personnel in the division of the Office of Education which deals with trade and industrial education.

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16. William Green, "Vocational Education," *American Federationist*, XLIII (1936). p. 18.
17. Henry Ohl, "Future Craftsmen of America," *American Federationist*, XLIV (1937), pp. 37-8.
18. Data in files of Advisory Committee on Education.
19. Views expressed by labour representatives interviewed January 13, 1937.
20. Interview held January 13, 1937.
21. Letter in files of the Advisory Committee on Education.
22. Interview held January 13, 1937. In this connection, a leaflet issued by the Division of Vocational Education reads: "The State Trade Schools take contracts for doing productive work, because only by doing the actual kind of work a skilled mechanic has to do can the student learn to become a skilled mechanic. For example, if a young man wants to become a carpenter, he can learn to be a carpenter much more readily by working under instruction on actual houses than by working on models of houses" (State Trade Schools, 1931.)
23. Interview held January 14, 1937.
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The Development of Vocational Education

The social agencies that have assumed the responsibility of preparing young people for participation in productive enterprise vary from group to group and from period to period. For many centuries the home, the farm, and the shop have carried the burden of providing the necessary training for vocational competence. In the past few decades in the United States, however, there has been a pronounced tendency to transfer some of this responsibility to the public school system.

Influences Modifying the School Programme

The schools traditionally have been concerned chiefly with education of an intellectual or bookish sort. Basically, however, the school programme has always been vocational in the sense of furnishing the foundation of training needed for the professions which require a content of intellectual materials. During the last half of the nineteenth century, as a result of social and economic conditions, there began to be great pressure on the schools to offer preparation for vocations other than the professions. The country was developing rapidly in commerce, industry, and agriculture. Leaders in these fields

began to insist that the public schools provide the training required to prepare young people for vocations of a non-professional type, such as the skilled trades, clerical and secretarial positions, and agriculture.

The efforts to relate formal education more definitely to the so-called useful and practical activities followed two distinct trends. One type of development led to what is known as practical arts or industrial arts; the other led to what is known as vocational education. It is necessary to distinguish clearly these two types of educational programmes, for they are based on differing psychological theories.

The movement for the development of instruction of the industrial arts type was the first to arise. Americans began to be greatly disturbed, early in the last quarter of the nineteenth century, at the general superiority of European craftsmen over those trained in the United States. This superiority was particularly apparent in the exhibits at the Centennial Exposition in Philadelphia in 1876. In many quarters agitation began for an effort to improve this situation by the inclusion of a new type of instruction in the schools of the United States. It was hoped and presumed that by providing instruction designed to develop the general manual, skill and dexterity of the pupils in the schools, a foundation would be laid for the later development of a high degree of artisanship in the skilled craftsmen of the country.

The suggestion for this new type of instruction fitted in neatly with the ideas of educators who were beginning to realize the need for a broadened curriculum in the schools. Leaders in education were advocating a democratization of opportunities in the schools through the provision of types of subject matter adapted to the interests and capacities of all classes of children. A few advanced thinkers were even advocating instruction of the manual arts or domestic arts type for all children as a valuable part of the school experience, of equal importance with the traditional intellectual materials of the classroom.

The combination of these pressures for improved craftsmanship and the plans of educators for greater democracy in the curriculum led to the development of a type of subject matter that was somewhat occupational in content but at the same time general, abstract, and formal, sometimes referred to as "industrial arts." The "mental discipline" theory of education was current, and new content in the curriculum, to be in keeping with this doctrine, could not be too obviously utilitarian. The aims in education of the industrial arts type were to develop general skill in doing a variety of things with the hands, and to inculcate an understanding of fundamental processes in such activities as agriculture, homemaking, commerce, and industry. It was confidently expected that the training in these abstract and formal skills would transfer or carry over into the practical situation of an actual job when the appropriate occasion arose in the life of the individual.

The second type of development, vocational education, rests fundamentally on a denial of the transfer of training, and on an insistence that instruction must be specific and pointedly directed toward the learning of the manipulative processes actually used in a certain job. For example, such a subject as manual training occupied an important place in an educational programme of the industrial arts type; instruction in vocational education, by contrast, was specifically related to the processes in a single occupation, such as carpentry or cabinetmaking.

A brief explanation of the psychological theories involved is perhaps necessary, because they are fundamental to the conflict between education of the so-called industrial arts type and that of the vocational type. The early psychological theory was that the training of the mind was much like the training of the muscles. By any type of mental exercise, such as solving difficult mathematical problems, it was thought that the individual could develop his general mental powers in much the same way that he could develop general muscular strength by lifting heavy weights. On the basis of this theory it was concluded that by teaching a pupil to work with a tool in any manual activity, such as planning a board, he would develop

general facility in the use of tools that would be advantageous with any other tool he might be called upon to use later.

This psychological doctrine held sway for a long time, but in the early years of the twentieth century the psychologists began seriously to question its validity. Their researches seemed to indicate that training is of value only when it occurs in the specific situation to which it is later to be applied. For example, according to this revised theory, when a pupil learns the principle of being neat in his mathematics papers, he will not carry over the training in neatness to the preparation of his papers in other subjects. If he learns to run a wood-turning lathe in a manual training department of a school, this training will have little or no value to him when he later takes a job as the operator of a band saw in a furniture factory. On the basis of their researches, the educational psychologists came to deny the transfer of training and it was widely advocated that all education must be made narrow and specific in order to function in the life situation.

More recent research has led to a considerable modification of the position of educational psychologists regarding the transfer of training. Most authorities now admit the possibility of a considerable amount of transfer. They disagree over the manner in which or the conditions under which it takes place, but the fact of a certain amount of transfer seems rather clearly established. The average mind makes generalizations from its training experiences that are applicable to a wide variety of life situations.

The development of ideas regarding the nature of vocational training was intimately connected with these changes in the theories of psychologists concerning the nature of the learning process. The idea of the general industrial arts type of preparation was based on the early conception which assumed almost complete transfer of training. The idea of the narrow and specific type of vocational education followed in the wake of the psychological theory which denied all transfer and insisted that the training, to be effective, must be intimately related to

the life situation. For example, under this theory, the boy who is to operate a lathe in a steel plant must be trained in the school on the identical kind of machine, using the same materials he will later deal with in the shop. Although the psychologists now have moved considerably from the position of denying all transfer of training, and admit the possibility of generalizations from training that carry over into a wide variety of life situations, many aspects of the programme of vocational education, as fostered by the Federal Government, still seem to be based essentially upon the psychological doctrine that denies any transfer of training.

The service of preparing young people for earning a livelihood in vocations of a non-professional type was a new task for the schools at the time, a generation or two ago, when social and economic pressures began to make necessary the introduction of this type of instruction. Little precedent existed by which they could organize this service, and procedures have necessarily been worked out largely by methods of trial and error.

Definition of Vocational Education

Vocational education is a very inclusive term and, viewed broadly, may cover all those experiences whereby an individual learns to carry on successfully any useful occupation. These experiences may be organized and institutionalized, or unorganized and more or less haphazard. In a narrower sense, vocational education may be defined as a series of controlled and organized experiences arranged to prepare a person for socially useful employment.

All education may be considered vocational in the sense that it should prepare for satisfactory living. It is customary, however, to distinguish between general education and vocational education, the former including all the instructional content in the course of study followed by the individual which is not directed strictly toward training him for employment or which applies alike to all persons regardless of their occupational destination. The line of division between general and

vocational education is by no means sharp; in fact, the classification varies in accordance with the individual purposes of the learner. For example, such a subject as spelling or English usage, commonly considered a part of general education, has definite vocational utility for one who intends to become a secretary. The present study does not attempt to draw fine distinctions and the term vocational education will be used to denote the more or less organized preparation for occupational effectiveness offered by the schools or by other social agencies.

Throughout this study the term vocational education is generally used in this very broad sense, and means all the services provided for increasing the occupational efficiency of the present and future workers of the country. It is true that the study is concerned chiefly with the federally aided programme of vocational education, and that the Federal authorities have adopted a somewhat narrower definition of the term than that here suggested. Throughout the succeeding pages, however, the reference to vocational education, when unmodified, will always be understood to mean a broadly conceived type of preparation.¹ The narrower type of training will be referred to as the federally reimbursed or the federally aided programme, or as vocational education in agriculture, in home economics, or in trades and industries.

The United States Office of Education, in its Statement of Policies for the Administration of Vocational Education issued in February 1937, defines vocational education as follows:

To the extent that it is subsidized by the Federal Government under the Vocational Education Acts, vocational education has reference to training for useful employment. It may be given to boys and girls who, having selected a vocation, desire preparation for entering it as trained workers; to youths who, having already entered employment, seek greater efficiency in that employment; and to adult workers established in their trade or occupation, who wish through increase in their efficiency and wage-earning capacity to advance to positions of responsibility.²

The practices of the Federal Office lay great stress on the clause "having selected a vocation." By this definition the education is not vocational until the pupil has selected his vocation, and he must select a vocation, that is, a single, narrowly defined occupation rather than a broad family of occupations.

Federal Legislation on Vocational Education up to 1935

The availability of a comprehensive history of Federal cooperation in vocational education, by Lloyd E. Blanch,³ makes unnecessary here any extended treatment of the stages by which the present programme has evolved. It will be sufficient merely to sketch the various developments up to the date of publication of Blanch's monograph (1935), and to summarize the modifications introduced in 1936 and 1937.

Early Federal Policies. From its very beginning the Federal Government has manifested an interest in education. The general welfare clause (art. I, sec. 8) of the Constitution has consistently been found broad enough to warrant the use of Federal funds for educational purposes. Recent decisions of the United States Supreme Court, involving the Agricultural Adjustment Act and the Social Security Act, seem to have established clearly the constitutionality of Federal aid systems such as those applying to education.⁴

The first indications of Federal activity in education were the reservation for the schools of the sixteenth section of every township, provided in the Ordinance of 1785, and the admonition for the encouragement of "schools and the means of education" in the Northwest Territory Ordinance of 1787. The early land grants were made for education in general, with no restrictions of any kind regarding the type of educational programme. A few of the grants were specified for universities, but none of them carried any provisions for Federal supervision of the schools.

The Land-grant Colleges. Federal interest in vocational preparation first took specific form in the Morrill Act of 1862.

by which large blocks of public land (or land scrip in lieu of land) were allocated to each State for the support of colleges of agriculture and mechanic arts. The allocation to each State was 30,000 acres for each of its Senators and Representatives in Congress. These grants were originally made as endowments, the income from which could be used to meet the current operating expenses of the colleges. The various States were required to assent to the provisions of the basic act before they could participate in the proposed benefits.

Federal support for the land-grant colleges of agriculture and mechanic arts has continued in the form of annual appropriations of money, and has been increased from time to time. In addition to the funds for supporting the instructional programme, Federal appropriations have been provided for agricultural experiment stations and for agricultural extension service on a co-operative basis.

Vocational Education in Secondary Schools. The movement for Federal aid to vocational education at the secondary school level did not develop until after the beginning of the present century. Previously there had been some interest in a number of States in the establishment of agricultural and trades schools, but relatively little progress had been made on the basis of private or local public support. During the years between 1900 and 1910 a number of organizations, notably the National Association of Manufacturers, the National Metal Trades Association, certain agricultural organizations, and the National Education Association, began to advocate extended facilities for vocational education in the public schools. The American Federation of Labour, always a strong friend of public education, urged that vocational training be provided under public auspices.

The various individuals and groups interested in this problem met in 1906 and established the National Society for the Promotion of Industrial Education. In 1911 this organization adopted and issued a statement of the provisions it believed should be incorporated in legislation authorizing Federal aid for

vocational education. These proposals were discussed vigorously, and in 1914 the Congress by resolution authorized the appointment of a Commission on National Aid to Vocational Education.

The Commission's report attracted much attention and had considerable influence. For various reasons there was delay, but early in 1917 Congress passed the Smith-Hughes Act providing Federal funds for distribution to the States for vocational education in public schools of less than college grade. The Act was approved by President Wilson on February 23, 1917.*

The Smith-Hughes Act provided a continuing appropriation for distribution to the States beginning with \$1,660,000 and increasing gradually each year until a total of \$7,167,000 was reached in 1926 and annually thereafter. In addition, \$200,000 was appropriated annually for a new Federal agency to administer the Act. The Federal appropriations made in the Smith-Hughes Act were for the promotion of two major divisions of vocational subjects—agriculture and trades and industries. Provision was made for the support of vocational education in home economics as a part of the programme in trades and industries, with the stipulation that not to exceed 20 per cent of the allotment for trades and industries should be used for home economics. The funds were specified as available for the reimbursement of the salaries of teachers, supervisors, and directors of agricultural subjects and salaries of teachers of trade, home economics, and industrial subjects in schools of less than college grade. Reimbursement might not exceed one-half of the salaries of the personnel specified above. The appropriations included sums for the support of the preparation of teachers of vocational subjects.

The appropriations for the reimbursement of salaries of teachers, supervisors, and directors of vocational education in agriculture reached a maximum of \$3,000,000 in 1926, to be distributed to the States on the basis of their rural population. The appropriations for the reimbursement of the salaries of

teachers of trades and industries, including home economics, reached a maximum of \$3,000,000 in 1926, to be distributed to the States on the basis of their urban population. The appropriations for teacher-training reached a maximum of \$1,000,000 in 1921, to be distributed to the States on the basis of their total population. From the beginning an annual appropriation of \$200,000 was made to the Federal Board for Vocational Education for the purpose of administering the Act. In 1934 the \$200,000 for administration was changed from a continuing appropriation to an authorization for an appropriation.

In addition to the allotments listed in the preceding paragraph, provision was made for a minimum appropriation to States which, on the basis of their population ratios, would receive amounts insufficient for the operation of any programme. These State minimums were set at \$5,000 each in agriculture, trades and industries, and teacher-training during the first few years and \$10,000 thereafter. A total of \$167,000 "or so much thereof as may be needed" was appropriated to care for these larger minimum allotments. According to the 1930 census the total amount required to make up the State minimums is \$157,978.

The Smith-Hughes Act provided funds for distribution only to the States; the Territories and Outlying Possessions were not included. In 1924 an Act was passed extending the benefits of the Smith-Hughes Act to Hawaii and authorizing annual appropriations of \$30,000 for that purpose.⁶ In 1931 the benefits of the Act were also extended to Puerto Rico, the amount of the annual appropriation authorized being set at \$105,000.⁷ With these supplementary enactments, the grand total provided through the Smith-Hughes Act amounts to \$7,502,000, distributed as follows: \$7,000,000 for allotments to the States; \$167,000 to provide for minimum allotments to the States; \$200,000 for administrative expenses in the Federal agency; and \$135,000 for Hawaii and Puerto Rico.

In 1929 Congress passed the George-Reed Act authorizing additional appropriations to supplement those of the Smith-Hughes Act.⁸ The additional authorized appropriation began at \$500,000 and increased by that amount each year until a total of \$2,500,000 was reached. The amounts were divided equally between vocational education in agriculture and in home economics, nothing being provided for vocational education in trades and industries.

The distribution for agriculture was on the basis of farm population; that for home economics was on the basis of rural population. An amount of \$100,000 annually was authorized to be appropriated for the administration of the Act. The George-Reed Act, in contrast to the Smith-Hughes Act, carried no authorization for continuing appropriations beyond the fiscal year (1934) in which the maximum was reached. Furthermore, the Act provided only an authorization for an appropriation, and made the actual appropriation subject to the budget considered on an annual basis by Congress. Unlike the Smith-Hughes Act, the George-Reed Act provided for distribution to the Territories (Hawaii and Alaska) on the same basis as the States.

By 1934, the leaders in vocational education were looking forward with some apprehension to a reduction in the programme owing to the discontinuance of the George-Reed appropriations. Congress was persuaded in that year to pass the George-Elzey Act⁹ which authorized an appropriation of \$3,000,000 annually for each of the ensuing three years, those ending in 1935, 1936, and 1937. The amounts were to be divided equally between vocational education in agriculture, in trades and industries, and in home economics, allotted to the States and Territories respectively on the basis of farm population, non-farm population, and rural population. For the expenses of administering the Act, an annual appropriation of \$100,000 was authorized. In addition to the foregoing amounts, an appropriation of \$84,603 was authorized to bring the allotment of each State in each of the three fields up to a minimum of \$5,000.

The George-Deen Act

Realization that the expiration of the appropriations authorized by the George-Ellzey Act would result in decreased Federal support for vocational education led rather early to efforts for the enactment of additional legislation. These efforts were probably stimulated also by the enactment of the Bankhead-Jones Act in 1935,¹⁰ which authorized additional appropriations for services through the Department of Agriculture, the agricultural experiment stations, and the land-grant colleges and universities, including agricultural extension work.

A group of Southern leaders in agricultural education met in Atlanta early in 1953 to discuss the emergency in the Southern States. A committee from this group came to Washington for a conference with the Commissioner of Education and members of his staff, and brought a request for more funds for vocational education. The Commissioner reviewed the request and at once called a conference to study the proposals.

The conference resulted in a definite statement which was prepared from a national, rather than a sectional, point of view. This statement was given to the American Vocational Association in the hope that that organization would initiate steps to secure emergency funds and to introduce measures providing for additional Federal appropriations for vocational education. The American Vocational Association had been active in promoting previous legislation appropriating funds for vocational education. The Legislative Steering Committee of the Association convened in Washington on May 6 and 7, 1935, and drafted a proposed bill to take the place of the George-Ellzey law.

On May 22, 1935, Senator Walter George, of Georgia, introduced the bill prepared by the Committee of the American Vocational Association. The same bill was introduced in the House of Representatives by Congressman Disney of Oklahoma. Congressman Lee, also of Oklahoma, introduced substantially the same bill. None of the bills on vocational

education, however, were reported on by committees during the first session of the Seventy-fourth Congress, which closed August 26, 1935. During the second session of this Congress Congressman Deen, of Georgia, introduced in the House a bill which was identical with the George bill.

The principal support and promotion of the vocational education bill came from the American Vocational Association. Immediately upon the introduction of the George bill in the Senate this organization began work, both in Washington and in the States, and made many friends for the proposal. Through the American Vocational Association Journal and News Bulletin the members were informed about the progress of the measure. In September 1935, the executive secretary of the Association stated that it would be necessary for the leaders in vocational education to plan definitely and systematically to inform their Senators and Representatives in Congress concerning the proposed legislation and its effect on their respective States.

Two agricultural organizations, the National Grange and the American Farm Bureau Federation, endorsed the vocational education bill. The American Municipal Association and a number of municipal leagues also took much interest in the vocational education bill, their primary interest being in aid for training for public service occupations. The American Federation of Labour gave its approval, but apparently not in a strong way.

During the second session of the Seventy-fourth Congress, the George bill was considered by the Senate and passed, without extensive debate, on April 28, 1936.

The Deen bill, after it had been revised in committee, was debated in the House on May 26. At that time the George bill, which had been passed in the Senate, was amended and substituted for the Deen bill; the substitute measure was then passed in the House. The Senate on May 27 and 28 debated

and passed the bill received from the House. The President approved it on June 8, 1936.¹¹

The George-Deen Act introduced certain new policies in the Federal programme of cooperation in vocational education. In the first place, the amount authorized to be appropriated for distribution to the States and Territories, including Puerto Rico and the District of Columbia, was more than doubled, an unprecedented increase for a single year. Thus instead of supplementing the Smith-Hughes appropriation of \$7,302,000¹² with \$3,084,603, as had been done by the George-Elzey Act, the George-Deen Act authorized a supplement, of \$14,483,000, raising the total appropriations authorized for distribution to the States and other areas for vocational education to \$21,785,000.¹³ In the second place, one new field of vocational training, the distributive occupations, was definitely recognized as worthy of Federal aid; and another field, the public service occupations, received a somewhat indirect recognition. In the third place, the George-Deen Act carried an explicit negative provision prohibiting the use of funds for training programmes in industrial plants unless they provided bona fide vocational training. In the fourth place, the States were not required to match the Federal funds dollar for dollar during the years immediately following the enactment of the law.

The next year, during the first session of the Seventy-fifth Congress, there was some debate regarding the amount to be appropriated under the provisions of the George-Deen Act. The budget message of the President suggested only \$3,000,000, but considerable pressure developed for the appropriation by Congress of the full amount authorized by the Act. The source of this pressure was discussed in the Senate in June 1937, while the appropriation bill for the Department of the Interior was under consideration. The following quotation is from the remarks of Senator Byrnes on that occasion:

When this matter was pending in the House after the House Appropriations Committee had gone into it thoroughly and made its report, some Members of Congress became quite

active to increase the appropriation of \$14,000,000. That amount was finally provided in the bill as it came to the Senate. Some House Members did not know from whence the pressure came. Finally it was learned that there had been sent throughout the country a telegram similar to the following:

Dr. L. A. Wilson,

State Department of Education, Albany, N.Y.:

Seems quite apparent that House Appropriations Committee may not recommend sufficient amount for George-Deen vocational appropriation. Amendment to report of appropriations committee will be submitted on floor of House by Congressman Fuller, Arkansas, to increase amount recommended by committee for vocational education. Very essential that your Congressman contact, cooperate with, and support Congressman Fuller and his amendment. Unless this is done vocational appropriations for next 5 years will be in serious danger. This is most urgent crisis we have faced during the last 3 years. We must have flood of telegrams and air-mail letters from influential persons and organizations to all your Congressmen requesting them to cooperate with Congressman Fuller. Chances for satisfactory vocational appropriation depend upon magnitude and thoroughness of this effort. Telegrams and letters must reach Congressman Tuesday and Wednesday at the latest. Telegrams to Congressman Fitzpatrick should not mention Fuller amendment but should urge full fourteen million vocational appropriation. A thorough job should be done in his congressional district.

(signed) L. H. Dennis,
*Secretary, American Vocational Association,
Denrike Building, 1010 Vermont Ave., Washington D.C.*

The telegrams came and the votes came and the \$14,000,000 was appropriated. The bill was reported to the Senate by

the Senate Appropriations Committee last Saturday. A few moments ago I was advised that 73 telegrams had been received in my office during the last 3 hours. They read alike, and that they are inspired is evident. Somebody has been spending from 60 to 75 cents per telegram to wire me to vote for the proposed increase in this appropriation. I do not blame the Mr. Dennis whose name appears on the telegram I have read. I suspect that he has inspired these telegrams. I do not blame this man for wiring throughout my State, not only to educators, but to American Legion Posts and labour organizations and farm organizations; but it is the most thorough job that has been done since the days when we received telegrams to oppose the utility holding-company bill.

This telegram says that "a thorough job should be done in the congressional district" of a certain Congressman. It may be I have been singled out for similar attention, but one Senator bows his head to indicate that he has been subject to the same bombardment in the last few hours.¹⁴

This appears to be the first clear-cut public statement regarding a situation which has for a number of years been of much concern to those well-informed in such matters.

The appropriation act for the Department of the Interior for the year 1937-38, as finally passed, carried the full amount of funds authorized by the George-Deen Act.

Summary of Federal Legislative Provisions

Table 6.1 summarizes the major Federal legislative provisions regarding vocational education since 1917.

Table 6.1 shows that four of the six acts are still in effect. Table 6.2 shows the amount of Federal funds appropriated or authorized to be appropriated for each purpose specified in the acts now in force.

TABLE 6.1

Federal Legislation for Vocational Education

<i>Act</i>	<i>Year enacted</i>	<i>Duration</i>	<i>Nature of appropriation</i>	<i>Allotments provided for</i>
Smith-Hughes ¹	1917	Continuous	Permanent	States, administration.
Hawaii ²	1924	Continuous	Authorized	Hawaii.
George Reed ³	1929	Five years	Authorized	States and Territories, administration.
Puerto Rico ⁴	1931	Continuous	Authorized	Puerto Rico.
George-Elizy ⁵	1934	Three years	Authorized	States and Territories, administration.
George Deen ⁶	1936	Continuous	Authorized	States, Alaska, Hawaii, Puerto Rico, District of Columbia, administration.

¹ 39 Stat. L. 929-36 (1917). For text see Appendix B.² 43 Stat. L. 17-8 (1924). For text, see Appendix B.³ 45 Stat. L. 1151 (1929).⁴ 46 Stat. L. 1489 (1931). For text, see Appendix B.⁵ 48 Stat. L. 792-3 (1934).⁶ 49 Stat. L. 1488-90 (1936). For text see Appendix B.

TABLE 6.2

Amount of Federal Funds Appropriated or Authorized to be Appropriated for Each Purpose by the Various Vocational Acts in Effect in the Year Ended June 30, 1938

[All figures in thousands of dollars]

Purpose	Total amount	Amount provided, by Act			
		Smith Hughes (1917)	Hawaii (1924)	Puerto Rico (1931)	George-Deen (1936)
1	2	3	4	5	6
Total ¹	\$22,335	\$7,367	\$30	\$105	\$14,833
Agriculture	7,040	3,000	10	30	4,000
Trades and industries: ²					
Maximum	7,040	3,000	10	30	4,000
Minimum	6,438	2,400	8	30	4,000
Home economics:					
Maximum	4,632	600	2	30	4,000

(Contd.)

TABLE 6.2 (Contd.)

I	2	3	4	5	6
Minimum	4,030	—	—	30	4,000
Teacher training	2,025	1,000	10	15	1,000
Distributive occupations ^a	1,200	—	—	—	1,200
To provide minimum appropriations to the States	450	4167	—	—	4283
Administration of the Act	550	200	—	—	350

¹ Notice that these totals include the minimum for trades and industries and the maximum for home economics. See footnote 3.

² An amount not to exceed 20 per cent of the appropriation for trades and industries in the Smith-Hughes Act may be expended for home economics. This basis applies also to Hawaii but not to Puerto Rico.

³ Including the training of teachers of distributive occupations.

⁴ Or so much thereof as may be needed. On the basis of the 1930 census an amount of \$157,978 is required to provide the minimum appropriation specified in the Smith-Hughes Act. On the basis of the 1930 census an amount of \$597,497 would be required to provide the minimum appropriations specified in the George-Deen Act.

TABLE 6.3
Allotments to States and Other Areas of Appropriations under the Four Vocational Acts in Effect in
the Year ended June 30, 1938¹

[All figures in thousands of dollars]

	1	2	3	4	5	6	7	8
		Total ²	Agriculture	Trades, industries and home economics ³	Trades and industries	Home economics	Teacher training	Distributive occupations
Total ²		\$21,776	\$7,126	\$3,059	\$4,089	\$40,79	\$2,169	\$1,254
Alabama		561	272	33	55	136	41	24
Arizona		116	36	10	20	20	20	10
Arkansas		420	221	17	31	105	29	17
California		807	161	182	213	108	89	52
Colorado		185	64	23	32	37	20	10

(Contd.)

TABLE 6.3 (Contd.)

1	2	3	4	5	6	7	8
Connecticut	234	46	50	64	34	25	15
Delaware	110	30	10	20	20	20	10
Florida	245	74	33	50	51	23	14
Georgia	606	288	39	63	144	46	27
Idaho	123	41	10	20	23	20	10
Illinois	1,094	235	247	280	142	120	70
Indiana	546	181	79	102	103	51	30
Iowa	478	204	43	63	107	39	23
Kansas	362	152	32	49	82	29	17
Kentucky	537	247	35	61	130	41	24
Louisiana	407	174	37	54	91	33	19
Maine	152	48	14	26	34	20	10
Maryland	255	66	43	59	47	26	15
Massachusetts	521	43	168	174	30	67	39

Michigan	729	183	145	171	110	76	45
Minnesota	466	184	55	70	93	40	24
Mississippi	473	262	15	27	119	32	19
Missouri	641	237	81	106	126	57	34
Montana	131	45	10	20	25	20	10
Nebraska	275	122	21	33	64	22	13
Nevada	110	30	10	20	20	20	10
New Hampshire	113	31	12	20	20	20	10
New Jersey	521	59	146	165	50	63	37
New Mexico	120	38	10	20	23	20	10
New York	1,627	204	461	500	148	197	116
North Carolina	679	330	35	66	169	50	29
North Dakota	181	81	10	20	41	20	10
Ohio	998	245	197	238	153	104	61
Oklahoma	481	215	36	58	112	38	22
Oregon	169	54	21	31	33	20	10
Pennsylvania	1,396	279	286	370	221	151	89

(Contd.)

TABLE 63 (Contd.)

1	2	3	4	5	6	7	8
Rhode Island	136	30	28	28	20	20	10
South Carolina	382	190	16	35	98	27	16
South Dakota	180	80	10	20	40	20	10
Tennessee	533	246	39	59	123	41	24
Texas	1,124	483	105	146	245	91	54
Utah	115	33	12	20	20	20	10
Vermont	113	33	10	20	20	20	10
Virginia	483	209	34	62	117	38	22
Washington	255	76	39	53	48	25	11
West Virginia	332	125	22	54	88	27	10
Wisconsin	513	186	68	87	99	46	27
Wyoming	110	30	10	20	20	20	10
Alaska	80	20	—	20	20	10	10

Hawaii	110	30	10	20	20	20	10
Puerto Rico	360	157	4	52 ⁴	110 ⁴	27	14
District of Columbia	81	20	—	21	20	10	10

1. Allotments shown are on the basis of population in 1930. Data were obtained from U.S. Office of Education, Vocational Education Bulletin No. 1, Statement of Policies for the Administration of Vocational Education, Revised February 1937 (Washington: U.S. Government Printing Office, 1937), Table 3, p. 97, and U.S. Office of Education, Table of Allotments to States and Territories under the George-Deen Act for the Further Development of Vocational Education for the Fiscal Year 1937-38, July 19, 1937 (multilithed). This table, which supersedes Table 4, p. 98, in the Statement of Policies, reduces the total allotments on the basis of population groups in the various fields by amounts sufficient to provide for the deficiency in the appropriation for minimum allotments to the States.
2. These totals have not been adjusted for differences due to rounding to thousands.
3. Note more than 20 per cent of these allotments may be used in the field of home economics.
4. The special set for Puerto Rico authorizes appropriations for trades and industries and for home economics separately. See Statement of Policies . . . 1937, Table 3, footnote 8.

Table 6.3 shows the amounts allotted to the various States and other areas for the fiscal year ended June 30, 1938, under these four acts. In this study the word "State" is used both as a general and as a specific term. In its usage as a general term it may include the 48 States, Alaska, Hawaii, Puerto Rico, and the District of Columbia, or the central governments of these areas. In connection with specific information, especially statistical information, the term "State" applies to one of the 48 States. The term "Territory" applies to Alaska or Hawaii; the term "outlying areas" to Alaska, Hawaii, and Puerto Rico; and the term "other areas" to Alaska, Hawaii, Puerto Rico, and the District of Columbia.

NOTES AND REFERENCES

1. See pp. 215-19 for a somewhat more explicit and extensive statement of the types of training needed in a soundly conceived programme of vocational education.
2. U.S. Office of Vocational Education Bulletin No. 1, Statement of Policies for the Administration of Vocational Education, Revised February 1937 (Washington: U.S. Government Printing Office, 1937), p. 6. This bulletin will be cited hereinafter as Statement of Policies . . . 1937.
3. Lloyd E. Blauch, Federal Cooperation in Agricultural Extension Work, Vocational Education and Vocational Rehabilitation, U.S. Office of Education Bulletin, 1933, No. 15 (Washington: U.S. Government Printing Office, 1935), p. 297.
4. *United States v. Butler*, 297 U.S. 1 (1935); *Steward Machine Company v. Davis*, 301 U.S. 548 (1936); *Helvering et al. v. Davis*, 301 U.S. 619 (1936).
5. 39 Stat. L. 929-36 (1917). For text, see Appendix B.
6. 43 Stat. L. 17-8 (1924). For text, see Appendix B.
7. 46 Stat. L. 1489 (1931). For text, see Appendix B.
8. 45 Stat. L. 1151 (1929).
9. 48 Stat. L. 792-3 (1934).
10. 49 Stat. L. 436-7 (1935).
11. 49 Stat. L. 1488-90 (1936). For text, see Appendix B.

12. Including the later acts for Hawaii and Puerto Rico.
13. The Smith-Hughes Act appropriates a total of \$167,000 "or so much thereof as may be necessary" to provide minimum appropriations to each of the States. On the basis of the 1930 census, the required amounts for this purpose total \$157,978. Thus the total at present authorized for distribution to the States and Territories on the basis of the 1930 census is \$21,775,978.
14. 75th Cong., 1st sess., Congressional Record, Senate, June 28, 1937 (Washington: U. S. Government Printing Office, 1937) Vol. 81, pt. 6, p. 6403.

Federal Participation in America

The necessity for organization and administration of the programme of vocational education was clearly recognized in the Smith-Hughes Act of 1917. The Act provided a Federal agency through which the enterprise could be administered, it took cognizance of the desirability of coordinating various interests involved in the programme, and it provided for organization and administration in the States in their co-operative relationships to the undertaking. This chapter is concerned with the arrangements for Federal administration of vocational education.

The Federal Board for Vocational Education

The Smith-Hughes Act created a Federal Board for Vocational Education, and assigned to this agency the final responsibility for the administration of the programme. The Board was composed of 7 members; 4 were ex-officio, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labour, and the United States Commissioner of Education; 3 were appointive, 1 representing agriculture, 1 representing industry, and 1 representing labour.

The Act specified that the 3 appointive members were to be "appointed by the President by and with the advice and consent

of the Senate." These members of the Board devoted their full time to the work and, with the Commissioner of Education, served as a standing committee to deal with matters assigned by the Board at its regular meetings. The annual salary of each appointive member was originally set at \$5,000 by the Smith-Hughes Act. Successive increases in the amount, through changes in the classification of the position, raised the salary first to \$6,000 in 1924, then to \$6,500 in 1925, to \$7,000 in 1928, and finally to \$8,000 in 1930.

By the provisions of an act passed in 1920¹ the Federal Board for Vocational Education was placed in charge of the programme of vocational rehabilitation for persons disabled in industry or otherwise. The problems of vocational rehabilitation of the physically disabled are dealt with in a separate study in this series.²

As an economy measure during the financial depression, Congress passed an act in 1933³ authorizing the President to group, coordinate, and consolidate executive and administrative agencies of the Government in order to reduce expenditures and increase efficiency. Acting under the provisions of this legislation, President Roosevelt on June 10, 1933, issued an Executive order,⁴ effective August 10, transferring the functions of the Federal Board for Vocational Education to the Department of the Interior. The order stipulated that the Board should continue to serve in an advisory capacity, but without compensation; no definite duties were specified for it. On October 10, 1933, the Secretary of the Interior assigned the functions of the Board to the United States Commissioner of Education, and ordered the necessary personnel of the Federal Board for Vocational Education to be assigned to the Office of Education.

Since the transfer of authority to the Office of Education in 1933, the Federal Board for Vocational Education has not been particularly active. An interval of more than two years elapsed between the time of the Executive order and the first meeting of the reconstituted Board in November 1935. This period of inactivity is explained in part by a change in the incumbent of

the office of Commissioner of Education and in part by the fact that it was necessary to select and have confirmed by the Senate 3 new appointive members. Thus, although the Executive order made no change in the membership of the Board, 4 of its 7 members were new at the time of its reconstitution in November 1935. The Federal Board has met only infrequently since the transfer of its authority to the Office of Education. Only one meeting was held in 1935, one in 1936, and two in 1937.

During the four meetings of the Federal Board of Vocational Education in 1935, 1936, and 1937, there has been a conspicuous lack of continuity in the attendance. The members—particularly those who are on the Board in an *ex officio* capacity—often send representatives instead of attending themselves. Although there are only 7 regular members, 13 different persons acted in the capacity of members during the course of the four meetings held in 1935, 1936, and 1937. Only 2 of these 13 persons have attended all four of the meetings; 2 others have been present for three meetings, 2 others have been present for only two meetings, and the other 7 have been present for only one meeting. Usually a rather large number of staff members from the Vocational Division of the Office of Education attend the meetings of the Federal Board; the average for the four meetings has been 7 from this group.

The constitution of the Federal Board for Vocational Education is now anomalous in certain respects. For example, the Commissioner of Education is a voting member of the group which has apparently no other function than to advise him in his administration of the programme. Also it is unusual to have a board consisting in part of Cabinet members serve as an advisory agency for a bureau chief.

Although the Executive order of 1933 indicated that the Federal Board for Vocational Education was thenceforth to serve in an advisory capacity, in practice the Board's own deliberations indicate considerable confusion regarding its actual functions. The Board once appointed a subcommittee to attempt to define its own functions, but this subcommittee did not make a report.

Federal Participation In America

On the basis of evidence obtained from a careful review of its activities, the Federal Board for Vocational Education as at present constituted does not appear to be rendering valuable advisory services to any great extent. There is, however, obvious need for a source or sources from which the officials in charge of the programme can obtain competent advice and counsel regarding plans and projects in vocational education.

Two different advisory functions may be clearly distinguished:

1. The promotion of inter-departmental coordination and technical advisory service based on the experience of other Federal agencies; and
2. The provision of opportunity for interested lay groups to give effective expression to their points of view regarding the development of vocational education.

In the first of these functions, that of interdepartmental coordination and technical advisory service by Federal agencies, Cabinet members cannot ordinarily be expected to render effective service personally. For the most part they lack time for the necessary attention to the details involved in the programme of vocational education. They also are likely to be somewhat unfamiliar with the technical details of the activities within their own departments that might be important to the programme of vocational education. If the Cabinet members could give sufficient time to the advisory service in vocational education, however, their lay points of view and their intelligent appraisal of general conditions might have much value; in some cases and at some times it appears that such values have actually been realized from the attention given to problems of vocational education by Cabinet members. In general, however, this function of interdepartmental coordination can best be served by an interdepartmental committee made up of personnel designated by the respective Cabinet members. The members of such a committee could serve regularly, could be given sufficient time to discharge their responsibilities adequately, and would be familiar both with the technical details of matters

within their own departments relating to vocational education and with the programme of vocational education itself.

The second function, that of providing opportunity for interested lay groups to bring their points of view to bear on the programme of vocational education, can best be served by an advisory committee or committees consisting of representatives of these various interests. The Office of Education has been conspicuously successful during the past few years in setting up such committees, and the work and influence of these groups in vocational education has in the past two or three years probably transcended in importance the service rendered by the Federal Board itself. This tendency toward the use of lay advisory committees deserves continuation and encouragement.

This analysis on the basis of the functions to be served makes it clear that the Federal Board for Vocational Education is not now well constituted for the service of advice and inter-departmental coordination needed by the Office of Education. The Federal Board could well be replaced by advisory groups of the type described above.

The Staff in the Federal Office

In accordance with the order of the Secretary of the Interior in 1933, the staff that had been serving under the Federal Board for Vocational Education was immediately taken over *in toto* by the Office of Education and made into one of the major divisions of the Office. The former Director became the Assistant Commissioner for Vocational Education and no significant changes were made in the functions or personnel of the staff for vocational education. At the time of the transfer to the Office of Education the staff consisted of a director, an educational consultant, 6 chiefs of services, 20 regional agents and research specialists, 2 supervisors of the rehabilitation service for the District of Columbia, an auditor for State accounts, and the necessary clerical staff. After the transfer the staff of

the Office of Education devoting its time to vocational education was practically as large in point of numbers as all the remainder of the Office of Education staff.

Although the powers and duties of the Federal Board for Vocational Education have been officially transferred to the Commissioner of Education, the Director under the Federal Board, now the Assistant Commissioner for Vocational Education, has been delegated authority by the Commissioner in the management of affairs pertaining to vocational education. This delegation of power is to a considerable extent merely a continuation or ratification of the power formerly delegated by the Federal Board to its chief executive officer. The Commissioner of Education has in the past two or three years begun to take a much more active interest than formerly in the programme of vocational education, and is now giving careful personal attention and supervision to this branch of the work in the Office of Education. This commendable step seems to be resulting in improvement in the service of vocational education.

The duties and responsibilities formerly under the control of the Federal Board for Vocational Education and now carried on by the staff of the Office of Education may be classified as follows:

1. Stimulating the development of vocational education.
2. Interpreting the provisions of the Federal legislation.
3. Approving the plans of the States for vocational education.
4. Supervising the programme in the States.
5. Carrying on research related to vocational education.
6. Administering the financial phases of the programme, such as allotting funds to the States, auditing accounts, and requiring informational reports.
7. Compiling material for the annual report to Congress.

Most of these duties are distinctly mentioned in the Smith-Hughes Act, and others grow out of the broad grant of "power to cooperate with State boards in carrying out the provisions of this Act."⁵

The Federal Office has classified the States into regions, and agents qualified in each of the four major fields—namely, agriculture, trades and industries, home economics, and rehabilitation—have been assigned to those regions. The duties of the regional agents in the main have been to work with State directors and State supervisors in the development of the respective programmes of vocational education.

It is customary for the regional agents in each of the four major fields to hold regional conferences at least once in each year. These conferences are attended by the State supervisors and teacher trainers representing the particular phase of the work about which the conference is organized. Plans are laid for improving and extending the programme; difficulties are discussed and suggestions made for overcoming them. Undoubtedly these conferences have been helpful to the State supervisors and have done much to advance the programme.

The regional agents have also spent considerable time in the various States inspecting actual instruction and, through suggestions, shaping the programme so that developments have been proceeding along the lines and in the direction which the Federal officials have felt advisable.

Another part of the supervisory programme has been the preparation of bulletins of various kinds, which have been distributed to the directors, supervisors, and teachers of vocational education throughout the country. These bulletins ordinarily have been prepared by committees selected by the Federal officials for the particular purpose. The reports have been in the nature of suggested courses of study, teacher helps, suggestions as to methods of carrying on vocational instruction, and materials useful to teacher-training institutions. This activity has been valuable and undoubtedly has increased the efficiency of the vocational programme.

Although the time and facilities available for the present investigation were so limited as to preclude an exhaustive appraisal of the quality of the work done by the Federal officials in charge of the administration of vocational education, sufficient information was gathered from various sources to permit certain conclusions to be drawn. These conclusions represent in general the opinions of disinterested observers who have had close contact with the work of the Federal Office.

The members of the Federal staff for vocational education have undertaken their administrative and supervisory duties seriously, and have carried on their functions zealously. The chief criticism is that the officers have tended to become immersed in routine administrative duties and to neglect some of the broader aspects of the service. The staff seems to have lacked a sufficient number of well-qualified persons at the higher levels.

After the original establishment of the Federal organization for vocational education, the tendency was to make assignments to the staff and promotions within that staff almost exclusively from among persons who had long been connected with the programme. Such a background of experience is undoubtedly useful for a large number of the members of the staff, but it would seem wise occasionally to add some one who can bring a fresh point of view and an outlook somewhat different from that of a person who has had familiarity only with the operation of this specific type of programme. The characteristics of the personnel and the organization of the staff have naturally led to an absorption in the routine phases of the administration of the acts, and have precluded the giving of adequate attention to such major problems as the development of policies and procedures in accordance with a broad social and educational outlook and the necessary co-operation with other social and governmental agencies in the conduct of the programme.

The conclusion is that at this time there is an urgent need for the introduction of some staff members of a somewhat different type from the majority of the present vocational

education personnel of the Federal Office. These new staff members should be qualified by training, experience, and personal philosophy to assist in developing the programme of vocational education in close co-operation with the general programme of public education. In the field of trades and industries it is particularly urgent that there be more staff members qualified to assist in the development and guidance of the programme with a view to the needs both of industry and of labour.

State Plans

The title of the Smith-Hughes Act stresses as its purpose the provision of "cooperation with the States" in the development of vocational education, and it is obvious that the framers of the Act intended the programme to be based on co-operative arrangements between the Federal Government and the States. In any such programme it is necessary to have some mutual basis of understanding between the two types of governmental agencies in the form of plans for the enterprise.

The Smith-Hughes Act specifically requires each State participating in the grants for vocational education to file with the Federal Board a plan setting forth the manner in which the programme is to be operated. The custom has been to require the submission of a new State plan every five years. The States has been permitted to offer amendments to their plans whenever they desire. The Act provides that the State plan must be prepared and submitted by the State board for vocational education.

Eight types of items that must be included in a State plan for vocational education are enumerated by section 8 of the Smith-Hughes Act, as follows:

... the kinds of vocational education for which it is proposed that the appropriations shall be used; the kinds of schools and equipment; courses of study; methods of instruction; qualifications of teachers; and, in the case of agricultural subjects the qualifications of supervisors or directors;

plans for the training of teachers; and, in the case of agricultural subjects, plans for the supervision of agricultural education, as provided for in section ten.

These provisions are further elaborated by the details of sections 9, 10, 11, and 12 of the Act. For example, section 10 specifies:

. . . That in order to receive the benefits of such appropriation for the salaries of teachers, supervisors, or directors of agricultural subjects the State board of any State shall provide in its plan for agricultural education that such education shall be that which is under public supervision or control; that the controlling purpose of such education shall be to fit for useful employment; that such education shall be of less than college grade and be designed to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home; that the State or local community, or both, shall provide the necessary plant and equipment determined upon by the State board, with the approval of the Federal Board for Vocational Education, as the minimum requirement of such education in schools and classes in the State; that the amount expended for the maintenance of such education in any school or class receiving the benefit of such appropriation shall be not less annually than the amount fixed by the State board, with the approval of the Federal board as the minimum for such schools or classes in the State; that such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year; that the teachers, supervisors, or directors of agricultural subjects shall have at least the minimum qualifications determined for the State by the State board, with the approval of the Federal Board for Vocational Education.

The Federal Board for Vocational Education (now the Commissioner of Education) is empowered by the Act to

review the proposed plans of the States with respect to their "conformity with the provisions and purposes"⁶ of the law. The Act further states that such plans, if found by the Board to be in conformity with the law, "shall be approved."⁷

The Federal Office of Education has issued a topical outline of some 22 pages listing the items to be included and followed in consecutive order by the States in preparing their plans. The practice, as reported by a large number of the States, is for the Federal agents to participate actively in the drafting of the plan by State officers, so that even before a plan is submitted for consideration to the responsible State board the criticism of the Federal officers has been obtained and the plan may have been substantially revised under this guidance.

The Statement of Policies

Shortly after it undertook its duties some 20 years ago, the Federal Board for Vocational Education began a process of building up a body of rules and interpretations supplementing the provisions of the Smith-Hughes Act. Since that time there has been steady production of rules, regulations, and interpretations dealing with a wide range of matters affecting vocational education.

Most of these rules and regulations have been collected in a code entitled Statement of Policies for the Administration of Vocational Education. The first edition of this statement appeared in 1917, the next general revision in 1922, and a reprint with a few further provisions in 1926. In 1936 a preliminary revision appeared, and in February 1937 a definitive edition, containing further extensive revision, was published.

With the exception of the latest edition of the Statement of Policies, appearing in February 1937 (and the preliminary edition in 1936), the regulations deal with interpretations of the Smith-Hughes Act and successive modifications in such interpretations. Major rulings on matters of policy were made in 1918, 1923, and 1925. Specific provisions of the George-Deen

Act are responsible for many of the changes appearing in the 1937 revision, but here also the rules and regulations are largely the result of administrative interpretations of the basic and supplementary legislation.

The latest edition of the Statement of Policies is a bulletin of 74 pages, exclusive of introductory material and appendices. During the 20-year period at least 97 different rules have been adopted by the Federal agency administering vocational education in addition to those adopted for the internal administration of its own office. Twenty-seven of these 97 pieces of sub-legislation have remained unchanged through the entire period of 20 years. Sixty now represent either adaptations of earlier rules or additions to them. Ten are changes or complete reversals of former policies.

The various editions of the Statement of Policies have been developed by the Federal Board for Vocational Education and the Office of Education with the cooperation and advice of representatives from various interested groups. The 1937 edition gives credit to a total of 125 persons who participated in preliminary regional conferences called to consider needed changes in policy. Four committees assisted in the development of this edition; one committee represented the professional staff of the Vocational Division of the Office of Education; one, composed of State and Federal officers and the Secretary of the American Vocational Association, was designated as a technical advisory committee on general policies; one committee consisted of representatives of labour and industry; and one group was the executive committee of the Council of Chief State School Officers. In a number of respects the procedure in developing the 1937 edition represented a considerable advance over previous practice.

In the first edition of the Statement of Policies, issued in 1917, the Federal Board for Vocational Education gave expression to its concept of the basis for the Federal-State relationships in vocational education in the following paragraph:

This co-operation of the States with the Federal Government is based upon four fundamental ideas: First, that vocational education being essential to the national welfare, it is a function of the National Government to stimulate the States to undertake this new and needed form of service; second, that Federal funds are necessary in order to equalize the burden of carrying on the work among the States; third, that since the Federal Government is vitally interested in the success of vocational education, it should, so to speak, purchase a degree of participation in this work; and, fourth, that only by creating such a relationship between the central and the local Governments can proper standards of educational efficiency be set up.⁹

With minor changes in wording this same paragraph is included in the most recent edition of the Statement of Policies (1937). This paragraph may quite properly be considered an official pronouncement by the central administrative agency of its conception of the purposes of Federal aid to vocational education. Briefly stated these purposes seem to be:

1. Stimulation;⁹
2. equalization of burden of support;¹⁰
3. purchase of an element of participation in the control of the programme; and
4. setting of standards to be followed by States and local communities.

Type of Federal Administrative Control

The Smith-Hughes Act is an outstanding example of specificity in legislation. The funds are rigidly allocated among the various fields in vocational education. The proportion of the pupils' time to be devoted to vocational subjects is specifically stated. Directed or supervised practice is required and the number of months which the school course and the practical work shall continue are specified. The number of hours per week to be devoted to vocational subjects by the pupils in full-time schools,

Federal Participation in America

and the number of hours per year for part-time pupils are definitely stipulated.

None of the other Federal statutes pertaining to educational programmes, such as the Morrill Acts or the Smith-Lever Act, contain anything like the amount of detailed provision that is embodied in the Smith-Hughes Act. It would seem that the framers of the Smith-Hughes Act had in mind a very clear conception of the kind of programme they wished the Federal Government to foster, and that they did everything possible to write into the Act the details that would be necessary to insure the support of just that programme and no other. Although at the outset this may have seemed necessary, human foresight is limited, and there is grave doubt regarding the desirability of the extreme amount of specificity embodied in the Smith-Hughes Act.

Legislation embodying many specific details of the operating features of a programme is in general objectionable. A statute defining the programme in broader terms and thus more adaptable to changing conditions would doubtless be of greater service.

Not only is the Smith-Hughes Act itself excessively specific, but in the interpretation of the statute the officials in charge of its administration have, in effect, supplemented and extended its provisions by a series of rulings that go beyond the requirements specifically established in the Act. The provisions of the legislation have been extended both by inferring prohibitions of certain types of activities and also by inferring permission to use Federal funds for purposes not specified in the Act.

Three examples of these extensions of the legislative provisions may serve to illustrate the type of administrative control exercised by the Federal officials. The Smith-Hughes Act does not grant the Federal Office authority to require that State plans shall include specifications regarding the qualifications of instructors who shall be reimbursed as teacher trainers. Yet the

Federal Office has instructed the States to include this detail in the State plans and to enforce the required qualifications in the programme if they wish their plans to be approved and the reimbursements provided. The Smith-Hughes Act makes no mention of the necessity of devoting three consecutive clock hours per day to strictly vocational subjects; the Act sets up the requirement in terms of a total amount of time per week. The plan of three consecutive clock hours per day, however, has been so insisted upon that most State and local officials apparently believe it to be a provision of the organic Act itself. Funds which the Smith-Hughes Act clearly specifies should be used for the preparation of teachers have been diverted to administrative service in State departments by the device of classifying supervision as a teacher-training activity.¹¹

Approval of State Plans. Important evidence of the type of Federal administrative control in vocational education is furnished by the procedure in the approval of State plans. The responsibility assigned to Federal officials by the Smith-Hughes Act in the approval of State plans is to see that they are "in conformity with the provisions and purposes of this Act." This is a duty that might be made relatively simple. Instead the Federal officials, particularly the field agents dealing informally with State officials during the preparation of State plans, appear to have used the provisions of the statute as authority to insist on detailed requirements as a condition for approval of the plans. Instead of viewing its responsibility merely as a safeguard against abuses and approving State plans except where they are distinctly contrary to a reasonable interpretation of the Act, the Federal agency at times in the past has chosen to interpret the provision as authority virtually to determine many aspects of the plans of the States for vocational education.

The authority of the Federal agency to disapprove State plans is enforceable principally because of another power granted in the Smith-Hughes Act. Section 16 states that "the Federal Board for Vocational Education may withhold the allotment of moneys to any State whenever it shall be determined that such moneys are not being expended for the purposes

and under the conditions of this Act." This is one of the powers transferred to the Commissioner of Education in the reorganization of 1933. Thus by denying approval of the State plan the Federal agency can put the State in the position of not expending its allotments under the conditions of the Act and can justify the extreme step of withholding further grants of funds.¹²

Section 16 of the Smith-Hughes Act provides for an appeal to Congress whenever the allotment of a State is withheld by the Federal administrative officers. During the 20 years of operation under the Act, no State has ever made such an appeal to Congress. This fact has been cited by some as evidence of universal satisfaction with the decisions of Federal administrative officers, but the opinions held by State officials, as obtained in this investigation, indicate that no warrant exists for such an interpretation. Several difficulties with the plan of assigning this judicial power to Congress may be pointed out.

1. Congress is not well equipped to render balanced judgment on a technical problem, such as might be involved in an appeal.

2. Other pressing legislative matters in Congress may bar due consideration of such a relatively small matter, and the appeal may become lost in the legislative jam. The Congress should not be encumbered with the necessity for considering appeals from administrative action.

3. Decisions by Congress are usually rendered after some delay. The State must have an early decision on its appeal, for the conduct of the programme depends on the decision. It would be a small service to a State to have a decision by Congress in its favour after the end of the school year to which such a decision would apply. Congress now begins its regular session in January; thus any decision made by it would necessarily come in the latter part of the school year, too late to support a programme for that year.

4. State authorities would rarely let a difference of opinion with Federal officers go to the length where funds would actually be withheld. They would in most cases acquiesce in the Federal demands before such an eventuality, for the reason that if they should lose the appeal to Congress, they might be held personally liable in their own State for failure to agree with Federal authorities in such a way as to obtain the Federal reimbursement.

5. The appeal is an inequitable procedure, for a State having a large and important delegation in Congress could doubtless obtain a more favourable hearing on its case than a State with limited representation.

6. The appeal to Congress is in some respects an unnecessary provision from the Federal point of view, for the reactions in Congress are carefully weighed by Federal officials regardless of the existence of an avenue of direct appeal. Any Federal administrative agency not only fears the deflation of prestige that would follow a veto of its action by Congress, but more significantly it fears the possibility of reprisals against its own budget requests by members of delegations from States that may consider themselves to have been unjustly treated. This type of indirect pressure by the State on the Federal officials, however, is possible only in case the State officials in vocational education are in close rapport with their representatives in Congress, and even in such cases the pressure is effective only in case the representatives from the State occupy positions of some influence in the organization of the Congress.

The basic idea of requiring the preparation and submission of plans by the States and joint agreement on these plans by State and Federal agencies is undoubtedly sound and of great value in a programme of Federal-State co-operation. The essential value lies in the stimulation afforded the State in preparing its plan rather than in control over details of the plan by the Federal agency. The fact that a plan has been prepared and submitted means that some appropriate agency in the State has given consideration to the question of suitable:

arrangements for vocational education. Question may be raised, however, regarding the desirability of statutory requirements and administrative policies that specify in detail the provisions that a State must incorporate into its plan for vocational education.

Development of the Statement of Policies. Earlier in this chapter reference was made to the Statement of Policies for the Administration of Vocational Education, formerly issued by the Federal Board for Vocational Education and recently revised and reissued by the Office of Education. The character of this code of rules and regulations is evidence of the type of administrative control that has been possible under the Smith-Hughes Act and that has characterized the programme of vocational education.

The Statement of Policies appears to perform four functions:

1. It supplies a general explanation of the provisions of the statutes and of the framework of administrative relationships;
2. it provides interpretations of moot points in the statutes concerning the availability of funds for various types of expenditures and under varying circumstances;
3. it amplifies the provisions of the statutes relating to State plans;
4. it indicates policies which, in the opinion of vocational education specialists in the Office of Education and in many State departments of public instruction, should be followed by the States in connection with some matters over which the Federal Office has no statutory authority.

Although there may well be difference of opinion as to the construction placed on some parts of the Smith-Hughes Act by the Office of Education, the explanatory and interpretative functions of the Statement of Policies seem entirely appropriate and highly desirable. The statutes relating to vocational

education are not easy reading, and the meaning of a number of the provisions is far from self-evident. In view of the auditing responsibilities of the Office of Education, it is important that all passages in the statutes that control the availability of funds should be clarified as much as possible.

The significance of the Statement of Policies, however, lies in the manner in which it amplifies the provisions of the statutes relating to the content of State plans. The extent to which the officials of the Office of Education regard themselves as vested with discretionary powers over the content of State plans is indicated by the relevant passages of the Statement of Policies. A comparison of the successive editions of the Statement indicates that the official concept of Federal discretionary authority has tended to grow with the passing of the years. The effect of every revision of the Statement of Policies has been to increase the amount of detail the States are required to submit for approval in their State plans. The history of present policies with respect to requirements for State supervision, the qualifications of teacher trainers, the use of teacher-training funds for supervision, and related matters illustrates the gradual expansion of Federal jurisdiction over the operation of the programmes in the States.

The inclusion in the Statement of Policies of suggested policies relating to matters over which the office of Education has no authority is of questionable wisdom. Undoubtedly the Office should exercise leadership, and it may well indicate to the States the practices which seem most productive of good results. Inclusion of such suggestions, however, in a document which is largely devoted to the interpretation of law easily leads to confusion on the part of the States as to what is mandatory and what is merely suggestion. This confusion, in turn, facilitates the expansion of the authority of the Office of Education. The requirement that qualifications of teacher trainers be specified in State plans, for example, first appeared as a suggestion. It now appears in the Statement of Policies as a mandatory requirement, although definite statutory authority for such a requirement appears to be lacking.

In discussion of the content of the Statement of Policies, the merits of the policies themselves should be distinguished from the general question of the extent of the Federal control which is exercised over the programme. A careful review of the successive editions of the Statement of Policies leads to the conclusion that each of the revisions, especially the last, has tended to foster a somewhat more liberal concept of vocational education and a closer relationship between vocational education and general education than the edition which it replaced; in this respect at least the difference between the Statements of 1917 and of 1937 is evident. There has been no relaxation, however, in the degree of Federal control over the programme; in fact, the contrary development has taken place.

Inhibition of Local Experimentation. The history of progress in American education is recounted largely in terms of local programmes that have been set up as variations from the accepted type. The local control that has been such an important characteristic of the American educational system has permitted freedom to experiment and to try out new forms of educational procedure. In any plan for centralized control there is usually difficulty in encouraging these experimental variations which are essential to progress.

To a large extent the present Federal programme of vocational education lacks this essential element of local experimentation. Practically none of the State plans provides for local experimental variations that deviate markedly from the accepted pattern. It is indeed doubtful if a State plan making such a provision would be or could be approved by the Federal Office, particularly if the proposed experiment happened to violate some of the requirements set up in the statutes or the Statement of Policies.

In a democratically controlled organization it is desirable to have the ideas for experimental try-outs generated as far as possible at the level of the application of the programme, that is, in the local school system rather than at the level of the ultimate

central control in the Federal Office. Opportunity for experimentation may wisely be limited to the stronger local systems. It is entirely sound to expect that the local system desiring to conduct an experiment which deviates from the established regulations shall first be in a position to maintain a good programme of the regularly approved type, and shall have an organization and personnel such that a reliable evaluation may be made of the experiment when it is completed. Institutions preparing teachers are in a particularly effective position to develop experimental programmes, and should be encouraged to set up laboratory schools in which new plans and procedures can be tried out and investigated.

The important point is that the central organization should always provide sufficient leeway for local school systems and educational institutions to carry on some experimentation, including projects which deviate widely from established regulations. Instead of insisting on rigid compliance with prescribed plans and requirements, the Federal statutes and administrative agency should permit and encourage experimentation in the programme of vocational education.

Conclusions Regarding Type of Federal Administrative Control. During the 20 years that the Federal Government has aided the development of vocational education, there has been a growing tendency for Federal controls of the programme to increase both in number and importance. Tentative suggestions have ultimately become rules, and rules have been given the effect of the organic Act itself. The specificity of details required in State plans has increased. The staff of Federal supervisors has been expanded. There has been developed in the States the habit of looking more and more to the Federal officials for guidance and direction in the development of State programmes.

A staff study recently completed for the National Resources Committee, relating to Federal grants-in-aid, concluded that the two Federal grants which are followed by the greatest degree of control are those for the National Guard and for the programme of vocational education.¹² It may be urged with

reference to the National Guard that, because this unit of service is an integral part of the national defense system, it is justifiable as well as wise for the Federal Government to control the enterprise rather completely. On the other hand, public education throughout its entire history in the United States has been developed primarily by the local communities without Federal centralization of control.

The conclusion is inescapable that the Federal control over vocational education has been so administered under the authority of the statutes as to shape very definitely and decidedly the development of the programme of vocational education in the States and local communities. The federally supported programme has to a considerable extent become a federally dictated programme in many States.

From the beginning of the Smith-Hughes programme the Federal authorities in immediate charge of the grants have had in mind a rather clear picture of their own definition of vocational education. If one agrees with the philosophy of the Federal officials, both as to policy and as to administration, it is highly conceivable that the resulting programme may be judged good, and that the controls will be deemed to have served a wise purpose. A different philosophy might adjudge that not only were some of the controls undesirable but also that the quality of the controls exerted should have been different.

Those who believe that an excessive degree of Federal control has been exercised over the programme of vocational education may well lay the major responsibility for this condition upon the Smith-Hughes Act. Whatever the intention of the framers of that legislation may have been with respect to the degree of Federal control contemplated, it is a fact that the Act includes numerous mandatory and specific provisions with respect to the conduct of local programmes of vocational education. It also includes many provisions which readily lend themselves to an interpretation vesting in State and Federal

officials a large degree of discretion over matters of local school and institutional administration.

In view of the extent to which the Act itself includes specification regarding local school administration, it is perhaps hardly to be expected that the administrative discretion vested in State and Federal officials would be exercised with any large measure of self-denial. In the hands of a personnel with a different philosophy of Federal relations to education, the Smith-Hughes Act would doubtless be administered in a different manner from that found by this investigation. It seems clear, however, in view of the practices which have become established, that a marked change in administrative policies in the direction of less Federal control probably can be brought about only by drastic revision of the Smith-Hughes and supplementary statutes. Such revision would involve the elimination of many of the provisions which either specify, or authorize State and Federal officials to specify, how federally aided vocational education shall be carried on in the local schools.

Research Functions

The Smith-Hughes Act makes explicit provision for carrying on research in vocational education as one of the important Federal activities in connection with the administration of grants for vocational education. During the 20 years since the enactment of the Smith-Hughes Act a rather extensive list of publications has appeared, reporting the results of studies conducted under the direction of the Federal Board for Vocational Education and the Office of Education. Of the 190 bulletins published during this period, about half were prepared by or in cooperation with other agencies or persons not on the Federal staff. In connection with such materials the Federal agency has acted principally as the avenue of publication. This seems an entirely legitimate function for a governmental agency. A method commonly employed in developing studies has been to appoint interested persons to a committee for the undertaking of a particular project.

Federal Participation in America

The volume of published studies has fallen off considerably in recent years, particularly in the field of trades and industries. This decrease may be due to a restriction of appropriations for printing, as well as to a diminution of research activities.

Though the volume of publication has been fairly extensive, at least until recent years, relatively few of the published studies could be classified as research by any strict definition of the term. Most of the studies are in the nature of statistical reports, or descriptive and statistical accounts and surveys of various programmes, or are suggestions of courses of study, teaching methods, and other instructional aids.

These bulletins containing suggestions for administrative and instructional procedures have undoubtedly proved helpful to those concerned with the promotion and conduct of vocational education in the States and local communities. In fact, it may be concluded that the best work of the Federal Office in this branch of its service has been in the production of such materials. Some very good work has also been done in the area of job analysis, which is fundamental to effective instruction. The fact cannot be ignored, however, that a disproportionately large amount of time and money has gone into the preparation of bulletins which contain chiefly statements of more or less authoritative opinion or nonevaluative collections of facts regarding the current status of the programme.

Research of an evaluative type has been very limited in the Federal programme of vocational education, and yet this type of research is a fundamental necessity to sound development. Little investigation has been made regarding the needs for vocational education and the types of service required to satisfy those needs. Little or no evidence has been gathered regarding the results or effectiveness of the instruction given.¹³ It would seem important, for example, to determine the number of pupils who complete courses in vocational education with a satisfactory degree of mastery and the success of these pupils in the employment in which they engage. The number of young people

trained for specific trade and industrial occupations who actually engage in the vocation for which trained has never been determined and published except for a few local communities.¹⁴ Information concerning the number of pupils who drop out of vocational training classes, their reasons for doing so, and what becomes of them afterwards would be valuable in appraising the programme. The value of very specific training, as opposed to a more generalized type of education for an occupation, has never been determined objectively, yet it would seem that the burden of proving the effectiveness of the type of training fostered under the Federal programme should rest with those who sponsor and promote its development.

Many other problems on which evaluation is needed could be enumerated, yet in the 20 years of operation under the Smith-Hughes Act relatively little has been done to settle such issues by careful research.

Evaluative research is facilitated by the availability of a considerable number of cases from which comparisons may be drawn. The Federal Government is in a peculiarly effective position for the conduct of such research, for it can undertake investigations of the evaluative type for which a State or local agency would lack sufficient cases for conclusive results.

It would seem that the maintenance of a research programme could well be one of the chief means used by the Federal Government for stimulating and promoting the development of vocational education. It would be a mistake, however, for the Federal officials to assume that all research designed to improve vocational education should be conducted directly by the Federal agency. The Smith-Hughes Act definitely provides for cooperation with other agencies of the Federal Government in the conduct of research related to vocational education. It would seem that the Office of Education should take advantage of the opportunities for utilizing capable personnel for research work by making grants of funds for particular research projects to some of the other departments and agencies of the Federal Government.

Many opportunities for effective research arise in the State offices, in the teacher-training institutions, and in the local school systems. These State and local agencies frequently also have personnel competent for the conduct of excellent research. It would be highly advisable to make definite provisions for Federal co-operation with such State and local agencies in research related to the vocational programme. There are two methods by which this co-operation might be financed.

The first method would be by direct grants of funds for research from Federal sources to the States or local communities. Such modification as may be necessary in the statutes might be made, so that a part of the grant for vocational education to each State could at the option of the State be set aside for research. The States and local communities could then be encouraged to set up staffs for the conduct of investigations related to vocational education.

The second method, and the one that seems the more desirable, involves making funds available for the subsidizing of research in State and local agencies on a project basis. Under this plan a State department of education, a teacher-training institution, or a local school system could propose to the Federal agency a piece of research which it would like to undertake. The proposal would indicate the nature of the investigation, the reasons for thinking that it is important to the programme of vocational education, the personnel available for carrying it on, the estimated length of time that would be required for its completion, and the budget that would be necessary to finance the project. The Federal agency could consider the proposal from the point of view of its suitability in all these matters. If the Federal agency was satisfied that the project afforded an opportunity for an important contribution by research methods, a definite grant for the particular research project could then be made to the State, or the institution, or the local school system. The Federal Office could maintain a consultative relationship to the project throughout its entire

progress. Precedent already exists for this type of Federal co-operation in research in the programme at present maintained through the agricultural experiment stations.

The development of the research programme on a project basis would avoid a tendency that might arise, in the alternative plan of outright continued grants, for the States to set up separate and permanent research organizations which at some time might not have important problems to investigate or might not be staffed with a personnel entirely competent for research in vocational education. Under the project arrangement, the subsidy would not be provided unless all the conditions necessary for an effective piece of research were met.

The research divisions that have already been established in State departments of education and in many local school systems have shown a marked tendency to go over into the field of administration and to take on executive duties rather than to remain purely research agencies. If Federal subsidies are given to research on a project basis, the tendency to turn the Federal funds into the support of an administrative unit in the State or local offices could be prevented. The teacher-training institutions would seem to be especially promising locations for the development of these research activities. The Federal Office might well be active in suggesting the lines along which research is needed.

An important element of any research and developmental programme is the publication of results. In fact, it seems unwise to authorize the initiation of research unless there are funds available for the publication of the results. The provision of funds for such publication is an eminently appropriate function for the Federal Government. The publishing facilities of the Federal Government should continue to be available, not only for research actually conducted through the use of Federal funds, but also for research related to vocational education that has been conducted under other auspices and for which no

other agency of publication is available. Suitable appropriations should be provided for such publications.

Advisory Functions

The Federal Office of Education is generally recognized as having the important function of providing advisory services to State and local authorities engaged in conducting educational programmes. The transfer of the administration of vocational education to the Office of Education clearly affords the opportunity to develop and extend the advisory services in this field and to integrate such services in vocational education with those in other phases of the school system.

Leadership in educational thought is peculiarly within the province of the Federal Government, and much can be done by this means, without control, to accomplish the objectives which the Government has in view. The central office is in a position to survey broadly the needs of the country, to obtain knowledge of superior procedures, and to point to areas in which adjustments seem advisable. Leadership, to be effective, must arise from a general recognition of the competence and expertness of the professional staff maintained by the Federal agency.

The advisory services of the Federal Office should be available only when welcomed by State and local authorities. In no case should such services be forced on communities or States that do not desire them. The services should be available not only in connection with the federally reimbursed programme, but also for matters pertaining to all types of vocational preparation.

Stability in Federal Policies

If a programme of education is to be conducted effectively on the basis of a co-operative arrangement between the Federal Government and the States, it is desirable that the Federal

Government determine a considerable time in advance of their actual application its policies with respect to such matters as the amounts of funds to be supplied, the purposes for which funds are to be used, and the conditions that must be met by the States. In most cases the States must act upon the programme through their legislatures, which typically meet for some 60 or 90 days at 2-year intervals. Thus the necessary legal arrangements in the States may require a relatively long period to mature after the determination of Federal policies. Local school budgets must be prepared and taxes levied and collected before the local elements of the programme can be put into operation.

Furthermore, a sound educational programme cannot be constructed hastily. Much thought must be given to planning on both the State and local levels. If an expansion is contemplated, teachers for staffing the programme must be recruited and trained, a process that requires a period of years. Plant space and equipment must be provided in the local schools, and these arrangements cannot be made overnight. If the change is in the direction of reducing the programme, it must also be made somewhat gradually; otherwise there is a sudden dislocation of personnel, reduced utilization of plant and equipment, and general lowering of efficiency and morale.

The primary need for stability in Federal policy is with respect to the amount of financial support to be provided. Sudden changes in the amounts of appropriations, whether increases or decreases, are likely to disturb the effective operation of the particular programme in States and local communities. The George-Deen Act is particularly at fault in this respect, as it authorizes the appropriation of an amount that in a single year more than doubles the support for vocational education from Federal sources. The evidence obtained in the preparation of this study is that few of the States could possibly have prepared to spend these increases wisely on the relatively short notice that was given by the Federal Government. It would have been a much sounder policy to have made gradual

increases in the amounts of funds, the maximum not being reached until a period of four or five years had elapsed.

Stability in the amount of financial support is difficult to provide, in a manner suitable for a co-operative programme, when the amounts to be made available from Federal sources are based on annual appropriations. The policy of making no continuing appropriations may be entirely satisfactory for activities which are supported completely from Federal funds, but it is likely to be disturbing to programmes that are carried on in co-operation with the States, and in which the States and local communities must make some provision for financial support to supplement the grants from the Federal Government. The States must make their plans considerably in advance, and the plans cannot be satisfactorily developed unless the amount to be available from the Federal sources is definitely known. Furthermore, it should not be necessary for those in charge of a cooperative programme to expend their efforts every year lobbying for the annual appropriation. The need for such appropriations should be determined for a considerable period in advance.

NOTES AND REFERENCES

1. 41 Stat. L 735-8 (1920).
2. Lloyd E. Blaunc, *Vocational Rehabilitation of the Physically Disabled*.
3. 47 Stat. L. 1517-20 (1933).
4. No 6 166.
5. Sec 6.
6. Sec. 8.
7. *Ibid*.
8. Federal Board for Vocational Education Bulletin No. 1, *Statement of Policies* (Washington: U.S. Government Printing Office, 1917), p. 7.
9. For a discussion of the need for stimulation, see pp. 224-25.

10. For a discussion of the relationship between the matching provision of the law and the equalization problem, see p. 87. A further discussion of the need for stimulation versus the need for equalization will be found on pp. 225-28.
11. See pp. 169-71 for an extended discussion of the desirability of this action.
12. For a general discussion of this problem in connection with all types of Federal grants to the States see V. O. Key, Jr., *The Administration of Federal Grants to the States* (Chicago: Public Administration Service, 1937), pp. 156-77.
13. An interesting type of approach to such a problem, with incidental reference to the effectiveness of vocational education, is presented by Walter Crosby Eells, "Judgements of Parents Concerning American Secondary Schools" *School and Society*, XLVI (1937), pp. 409-16.
14. In a few local centers interesting studies have been made in following up the graduates of vocational courses, but these are the exception rather than the rule. In small centers the teacher frequently has personal knowledge of the situation of those whom he has trained. No figures, so far as could be discovered in this investigation, have been compiled covering such information on a national basis, although there has recently been one such study (unpublished) on a regional basis. Most of the studies cover periods of short duration and neglect the long-time effect of the programme.

Financing of Vocational Education

The major purpose of the Federal legislation relating to vocational education has been to make funds available for the promotion of this type of educational service. As previously noted, there have been six pieces of legislation providing or authorizing Federal appropriations for vocational education.

Amounts of Federal Appropriations and Expenditures

The amounts of the Federal appropriations for each phase of the programme of vocational education, available each year from 1918 to 1937, are shown in Table 8.1. The amounts shown in this table include the appropriations to provide the minimum allotments to each State. It will be noted that the amounts of appropriations have tended to increase, except in the fiscal years ending in 1933 and 1934, when the Economy Act reduced the general schedule of all appropriations.

Table 8.2 shows the actual expenditure of Federal funds for vocational education in each of the years from 1918 to 1937.

A conception of the magnitude of Federal aid for vocational education may be obtained by comparing the sums shown in Table 8.1 and 8.2 with the total amounts expended for public

TABLE 8.1

Federal Appropriations for Distribution to the States, Territories, and Puerto Rico for Vocational Education, by Field of Service and by Fiscal Year, 1918 to 1937¹

Year ending June 30	Total ²	Trades and industries		Home economics		Teacher- training
		Maximum	Minimum	Maximum	Minimum	
1918	\$1,655,587	\$564,445	\$451,556	\$112,889		\$544,114
1919	2,307,460	794,463	635,570	158,893		730,421
1920	3,051,919	1,032,876	826,301	206,575		996,405
1921	3,632,177	1,277,074	1,021,659	255,415		1,088,228
1922	4,120,834	1,523,074	1,218,459	304,615		1,086,766
1923	4,615,160	1,769,174	1,415,339	353,835		1,086,766
1924	5,190,448	2,067,180	1,653,744	413,436		1,086,766
1925 ³	6,198,716	2,536,827	2,052,098	513,025		1,096,766
1926 ⁴	7,184,902	3,031,987	2,444,918	611,203		1,096,766
1927 ⁵	7,184,902	3,056,148	2,444,918	611,230		1,096,766

Financing of Vocational Education

1928 ^a	7,184,902	3,031,987	3,056,148	2,444,918	611,230	1,096,766
1929 ^a	7,184,902	3,031,987	3,056,148	2,444,918	611,230	1,096,766
1930 ^a	7,684,902	3,281,987	3,056,148	2,444,918	861,230	1,096,766
1931 ^a	8,184,902	3,531,987	3,056,148	2,444,918	1,111,230	1,096,766
1932 ^a	8,732,978	3,791,354	3,071,265	2,459,412	1,373,853	1,108,359
1933 ^a	8,044,180	3,497,397	2,774,767	2,224,099	1,322,096	1,000,587
1934 ^a	7,324,700	3,190,000	2,542,500	2,038,800	1,165,200	930,700
1935 ^a	10,377,581	4,089,874	4,121,457	3,509,604	1,663,245	1,114,859
1936 ^a	10,377,581	4,089,874	4,121,457	3,509,604	1,663,245	1,114,859
1937 ^a	10,377,581	4,089,874	4,121,457	3,509,604	1,663,245	1,114,159

^a Data derived from U.S. Office of Education, *Vocational Education Bulletin* No. 1, Statement of Policies for the Administration of Vocational Education, Revised February 1937 (Washington: U.S. Government Printing Office, 1937), Appendix B, Table 1, p. 95. The totals here given have not been adjusted for differences due to rounding to dollars.

¹ Notice that these totals include the minimum for trade and industries and the maximum for home economics.

² Including Hawaii.

³ Including Alaska and Hawaii.

⁴ Including Alaska, Hawaii, and Puerto Rico.

TABLE 8.2
Expenditure of Federal Funds for Vocational Education, by Field of Service and by Fiscal Year,
1918 to 1937¹

Year ending June 30	Total	Agriculture	Trades and Industries	Home economics	Teacher- training
1918	\$832,427	\$273,282	\$307,375	\$57,774	\$193,996
1919	1,560,009	528,679	491,193	115,952	424,185
1920	2,476,502	889,886	699,644	155,768	731,204
1921	3,357,494	1,192,131	1,006,571	192,387	966,405
1922	3,850,118	1,435,475	1,170,907	245,886	997,850
1923	4,308,886	1,669,699	1,345,911	285,969	1,007,307
1924	4,832,881	1,897,808	1,589,524	331,861	1,013,688
1925 ^a	5,614,550	2,262,543	1,973,634	400,120	978,253
1926 ^a	6,548,658	2,656,886	2,403,774	499,631	988,367
1927 ^a	6,729,212	2,801,592	2,426,577	485,033	1,016,010
1928 ^a	6,821,452	2,844,464	2,454,445	492,158	1,030,385

1929 ^a	6,878,530	2,903,960	2,467,217	481,193	1,026,160
1930 ^a	7,404,224	3,173,624	2,509,531	678,226	1,042,843
1931 ^a	7,978,728	3,461,542	2,578,544	876,891	1,061,751
1932 ^a	8,414,833	3,688,513	2,546,900	1,130,398	1,049,022
1933 ^a	7,728,245	3,364,441	2,298,676	1,116,077	949,051
1934 ^a	6,950,945	3,006,950	2,098,241	958,579	887,175
1935 ^a	9,371,979	3,715,954	3,291,901	1,365,404	998,720
1936 ^a	9,748,925	3,862,901	3,429,773	1,428,801	1,027,450
1937 ^a	10,013,669	3,966,716	3,553,812	1,442,323	1,050,818

¹ Data obtained from the U.S. Office of Education. Because of revisions, these data do not in all cases correspond to those found in published reports.

^a Including Hawaii.

^a Including Alaska and Hawaii.

^a Including Alaska, Hawaii, and Puerto Rico.

education in the United States. Preliminary statistics supplied by the United States Office of Education for the year 1935-36 indicate a total expenditure for public elementary and secondary education amounting to \$1,968,898,198.¹ This figure includes current expenditures, capital outlay, and interest, but excludes payment on principal of indebtedness. The total Federal expenditures for vocational education in that same year amounted to slightly less than 0.5 per cent of the total expenditure for public elementary and secondary education.

The Federal appropriations for vocational education are available only for instruction of pupils 14 years of age or more, and for the preparation of teachers of such pupils. Comparison may therefore be made appropriately between the Federal expenditures for vocational education in secondary schools and the total expenditures for public secondary schools. The total Federal expenditure for vocational education, excluding teacher-training, in 1935-36 was \$8,721,475. This is only a little more than 1 per cent of the total estimated expenditures in that year for public secondary schools in the United States.²

Although the amounts of the Federal appropriations are relatively small compared to the total cost of education, the administrative provisions governing the distribution of the funds to the States are significant. It is the purpose of this chapter to discuss in detail a number of features of the Federal-State relationship involved in the provision of these grants of aid from the Federal Treasury.

Matching of Federal Funds by State and Local Funds

One of the features of Federal-State relationships in the financing of vocational education is the requirement that Federal funds be matched by State and local funds. The Smith-Hughes Act provides "that for each dollar of Federal money expended...the State or local community, or both, shall expend an equal amount."³ The George-Reed Act and

the George-Ellzey Act followed the same matching requirements. The George-Deen Act departs from this precedent and requires matching in the programme of the secondary school level only to the extent of 50 per cent of the Federal funds each year until 1942, and then 10 per cent additional each year thereafter until a maximum of 100 per cent matching is reached. In teacher training, however, the George-Deen Act requires matching on a dollar for dollar basis from the beginning.

In practice, the States and local communities in their combined contributions have gone considerably beyond the matching requirements set up in the statutes; instead of providing only one dollar for each Federal dollar they have provided from two to three dollars of State and local funds. Table 8.3 presents data showing the extent to which the States and local communities have expended their own funds in the maintenance of the Federal programme of vocational education.

The data on expenditure of State and local funds are presented in Table 8.3 as grand totals. An analysis by individual States shows wide variation in the extent to which the support of the programme is shared between Federal and State and local sources. The general condition of overmatching of Federal appropriations is to a considerable degree the result of unusually large support from State and local sources in a few States.

The extent of overmatching varies markedly also among the fields in which training is offered, the State and local support for vocational education in trades and industries and in home economics being relatively much larger than for vocational education in agriculture and teacher training. Table 8.4 shows the amount of State and local funds supplied in 1935-36 for each dollar of Federal funds in the various fields.

The differences shown in the matching of Federal funds by State and local expenditures in the various programmes are

TABLE 8.3
Expenditure of State and Local Funds for Vocational Education, by Field of Service and by Fiscal Year, 1918 to 1937¹

<i>Year ending June 30</i>	<i>Total^a</i>	<i>Agriculture</i>	<i>Trades and Industries</i>	<i>Home economics</i>	<i>Teacher training</i>
1918	2,206,634	466,651	1,229,064	276,775	234,144
1919	3,391,770	885,260	1,511,281	438,244	556,985
1920	6,058,661	1,547,399	2,697,082	898,721	915,459
1921	9,260,768	2,200,957	4,285,190	1,629,961	1,144,660
1922	10,962,870	2,662,965	5,246,871	1,872,677	1,220,357
1923	12,823,561	2,977,343	6,167,217	2,462,979	1,216,022
1924	14,012,471	3,356,106	6,965,960	2,412,775	1,277,630
1925 ^a	15,305,306	3,883,581	7,604,260	2,543,404	1,274,061
1926 ^a	16,633,673	4,507,574	8,247,064	2,637,760	1,241,275
1927 ^a	17,779,414	4,667,704	8,904,487	2,852,795	1,354,428
1928	18,888,294	4,764,449	9,566,210	3,228,974	1,328,661

1929 ^a	20,586,853	5,515,022	10,279,493	3,421,926	1,370,412
1930 ^a	22,454,576	5,569,759	11,770,549	3,703,811	1,410,457
1931 ^a	24,160,464	6,517,086	12,229,997	3,874,384	1,538,997
1932 ^b	24,883,612	6,524,297	12,878,823	3,998,641	1,481,851
1933 ^b	22,294,693	6,104,094	11,316,086	3,561,581	1,312,932
1934 ^b	21,132,870	5,326,720	11,248,451	3,373,399	1,184,300
1935 ^b	19,915,151	5,149,655	9,885,542	3,665,199	1,214,755
1936 ^b	23,677,244	6,464,333	11,576,355	4,377,960	1,258,596
1937 ^b	26,379,777	6,876,102	13,758,750	4,447,742	1,297,183

^aSee table 8.2, footnote 1.

^bThe totals here given represent only the totals of the amounts distributed by subjects. In some years there are small amounts of State funds reported that are not distributed by subjects; these amounts have not been included in the totals here given. For 1937 this undistributed item amounted to \$5,839, making the grand total State and local expenditures \$26,385,616.

^cIncluding Hawaii.

^dIncluding Alaska and Hawaii.

^eIncluding Alaska, Hawaii, and Puerto Rico.

interesting. A part of the cause of the difference between the amount of local funds used for agriculture and for trades and industries doubtless lies in the fact that instruction in agriculture is typically given in rural or small urban communities, whereas classes in trades and industries are given almost exclusively in cities. The rural regions in general have lower economic ability than the urban areas and hence are less able to provide local funds in excess of the minimum matching requirements.

TABLE 8.4

State and Local Expenditure Per \$ 1.00 of Federal Expenditure in the Federally Reimbursed Programme of Vocational Education, by Field of Service, Year ended June 30, 1936*

<i>Field</i>	<i>State and local expenditure per \$1.00 of Federal expenditure**</i>		
	<i>State and local funds</i>	<i>State funds</i>	<i>Local funds</i>
Total	\$2.43	\$0.88	\$1.55
Agriculture	1.67	0.53	1.15
Trades and industries	3.38	1.23	2.14
Home economics	3.06	0.95	2.11
Teacher training	1.22	0.95	0.28

*Data derived from U.S. Office of Education, Vocational Division, Digest of Annual Reports of State Boards for Vocational, Education to the Office of Education, Division of Vocational Education, Fiscal Year ended June 30, 1936 (mimeographed), Statistical and Financial Tables sec. 1 Tables 8.7—8.12. The figures have not been adjusted for differences due to rounding off decimals.

**Note that data for Alaska, Hawaii, and Puerto Rico are included.

State funds are used to a smaller extent for the programme in agriculture than for that in any of the other fields, in part probably for the reason suggested for the difference in local expenditures. The bulk of the funds specified for vocational

education in agriculture, distributed on the basis of rural or farm population, goes to the States having low economic ability. The States receiving the bulk of the grants on the basis of urban population, specified for vocational education in trades and industries, are in general superior to the average in economic ability and thus are well able to supplement the Federal funds relatively generously in the maintenance of the vocational programme.

The policy of requiring matching of Federal funds by State and local funds is one that is widely followed in programmes of Federal grants-in-aid to the States. In at least a dozen areas other than vocational education this policy is followed. In almost all cases the matching is on a dollar for dollar basis, the chief departures from this policy being the recent George-Deen Act and the grant for aid to dependent children. In the latter case the Federal contribution may not exceed one-third of the total.

Two reasons are commonly given in justification of the matching policy. In the first place, the total amount of money made available, and consequently the extent of the programme, are greatly increased by the matching. In the second place, it is believed that the Federal funds will be more carefully used if State or local funds are also utilized in support of the programme. The first of these contentions seems plausible, though it is possible that States and local communities would have put as much of their own funds into vocational education without the matching requirement as with it. The fact that the minimum expenditures required for matching have been considerably exceeded in more than half the States is evidence on this point. Evidence regarding the effect of matching on the care with which funds are used is entirely lacking.

One very definite objection may be raised against the matching requirement in the programme of vocational education. By reason of this provision Federal funds are, by State administrative policies, almost necessarily directed into the local communities that have the greatest economic ability. For

the most part the States provide for uniform matching among their communities from local funds, and thus, unless State equalization funds are provided, the less able communities cannot readily obtain the local funds necessary for the matching. Some of the States provide for a part of the matching to be done with State funds, but in very few States are the local communities entirely relieved from the necessity of providing some of the matching funds.

This factor of inequality in the distribution holds for entire States as well as for local communities. The less able States can match Federal funds only with much more effort than the wealthier States. There is a strong probability that in some of the least able States the matching has been made possible only by diverting support from other needed educational services. Thus the appropriation of Federal funds with a fixed matching requirement tends to increase the present inequalities of educational opportunity among the States and within each State.

In discussing the matching principle, a recently published staff study made for the National Resources Communities states:

The reasons of expediency advanced in favour of percentage divisions are hard to overcome, yet a logical basis for their continuance is equally difficult to discover. If a better basis for apportionment cannot be evolved the precise percentage contributions should be fixed by the joint action of all participating units.⁴

The National Advisory Committee on Education stated its position on matching as follows:

The matching of federal money grants, with state or local funds whether their use is for general or special educational purposes is a policy not to be favoured in the field of education.⁵

The conclusion seems clear that the matching principle is of doubtful wisdom.

Minimum Appropriations

The vocational education acts have generally followed the practice of making a minimum appropriation to the States in order that no State because of limited population may receive an allotment too small to permit the setting up of a programme. The Smith-Hughes Act provided a special appropriation for the purpose of bringing the allotment of each State in each of the three fields of service (vocational education in agriculture, in trades and industries, and teacher-training) up to a minimum of \$10,000, or a total of \$30,000. The George-Reed Act made no provision for additional appropriation for minimum allotments. The George-Ellzey Act authorized appropriations to bring the allotments to each State in each of the three fields (vocational education in agriculture, home economics, and trades and industries) up to a minimum of \$5,000. Thus the total of the minimum allotments during the time the George-Ellzey Act was in effect was \$45,000 per State (\$30,000 from Smith-Hughes funds and \$15,000 from George-Ellzey funds).

The George-Deen Act made a much more generous provision for minimum allotments than any of the preceding enactments. The minimum amount was set at \$20,000 in each of the three fields of agriculture, home economics, and trades and industries, and \$10,000 each was made the minimum in the fields of distributive occupations and teacher training. These minimums were in addition to those provided in the Smith-Hughes Act. The total minimum appropriation after 1937 thus amounts to \$110,000 per State. The George-Deen Act seems deficient, however, in that it sets the total appropriations to provide for these minimum allotments at \$283,000, whereas a computation on the basis of the 1930 census, released by the Office of Education,⁶ indicates that a total of \$597,497 would be required to supply these minimums.

The justification for setting up a minimum appropriation to each State is that there are certain costs of maintaining a programme that must be met and that do not vary with its extent. For example, some kind of a supervisory organization must be maintained by the State even if the programme is small; vocational classes must be carried on in at least a few local centers if anything at all is accomplished by way of stimulation within the State. Thus the appropriations to a State must reach at least a certain minimum in order that some sort of a programme may be carried on, regardless of how small the population of the State may be.

Special allotments totalling \$157,978 are required in 16 States, on the basis of the 1930 census figures, to provide the minimum appropriations set forth in the Smith-Hughes Act. The George-Ellzey Act made it necessary to provide supplementary allotments to 16 States and to 2 Territories. A total of \$242,581 was required in the fiscal year ending in 1937 to provide allotments so that the amounts received by each State on the basis of population could be brought up to the guaranteed minimum. These allotments included both those under the Smith-Hughes and those under the George-Ellzey Acts.⁷ As previously noted, the George-Deen Act raised the amount of the minimum appropriations very greatly. On the basis of the 1930 census supplementary allotments are provided under the George-Deen Act for 19 States, 2 Territories, and the District of Columbia.

Table 8.5 lists the States and other areas obtaining these special allotments and the amount required as a supplementary appropriation in each field in order to bring up the apportionment of the States to the guaranteed minimum. The grand total required under the Smith-Hughes and George-Deen minimums, on the basis of the 1930 census, is \$755,474. The George-Deen Act, as previously noted, fails by \$314,497 to authorize sufficient appropriations to meet the guaranteed minimums.⁸

A simple test of the need for these supplementary allotments may be obtained by studying the use made of the funds in the States receiving them. Under the schedule provided by the Smith-Hughes and the George-Elzey Acts the majority of the States receiving supplementary allotments were unable to use all of the funds provided. More than half of these States receiving supplementary allotments turned back to the Federal Treasury 10 per cent or more of the funds provided them on the minimum basis. In the face of such circumstances, the increase made in the minimum provisions by the George-Deen Act seems entirely unjustifiable.

The provision in the George-Deen Act which increases the minimum allotments to the States was apparently based on the mistaken conception of a necessity for relating the amount of the minimum to the amount of the Federal appropriation. It should be clear, from the educational justification that has been presented for the minimum allotment, that the amounts so designated are not required to be any fixed percentage of the total Federal appropriation. Instead the amounts needed for minimum allotments are determined by the nature of the costs that do not vary with the scope of the programme. For that reason it seems sound policy to make the minimum allotments a fixed amount and not to vary them according to the amount of the total Federal appropriation. The amount set up for minimum purposes in the Smith-Hughes Act, namely a total of \$30,000 per State, seems to be adequate for the maintenance of a minimum programme. Possibly the addition of a new field, such as the distributive occupations, might justify a small increase in this minimum appropriation.

Perhaps a better precedent with regard to minimum appropriations was set in the Smith-Lever Act providing grants for agricultural extension services than the Smith-Hughes Act. The Smith-Hughes Act makes the regular allotment on the basis of population and then provides funds to bring up the total for each State to the specified minimum. The Smith-Lever Act, by contrast, first makes a small basic appropriation, which is the same for all States, and then adds to this amount an allotment

TABLE 8.5

Allotments Needed to Provide Minimum Appropriations Under the George-Deen and Smith-Hughes Acts on the Basis of the 1930 Census, by Field of Service and by State*

<i>State</i>	<i>Total</i>	<i>Agriculture</i>	<i>Trades and industries**</i>	<i>Home economics</i>	<i>Teacher training</i>	<i>Distributive occupations</i>
Total	\$755,474	\$166,643	\$178,892	\$107,478	\$203,769	\$98,692
Arizona	35,214	7,482	8,975	—	12,946	5,810
Colorado	3,263	—	—	—	3,227	36
Connecticut	9,028	9,028	—	—	—	—
Delaware	69,546	17,693	16,363	11,643	16,140	7,707
Idaho	31,812	—	13,299	—	12,793	5,719
Maine	9,416	—	—	—	7,087	2,329
Massachusetts	4,415	4,415	—	—	—	—
Montana	23,885	—	7,762	—	11,294	4,829
Nevada	93,596	24,766	25,284	15,896	18,525	9,124

New Hampshire	38,815	12,053	2,712	6,061	12,465	5,524
New Jersey	3,423	3,423	—	—	—	—
New Mexico	33,022	—	13,949	—	13,145	5,925
North Dakota	25,280	—	12,854	—	8,975	3,451
Oregon	5,380	—	—	—	4,555	825
Rhode Island	53,492	25,014	—	16,224	8,867	3,387
South Dakota	23,378	—	11,263	—	8,780	3,335
Utah	27,895	5,368	3,155	2,481	11,776	5,115
Vermont	43,173	5,723	14,198	2,534	14,177	6,541
Wyoming	65,368	12,084	20,381	8,726	16,347	7,830
Alaska	72,445	19,648	17,573	16,270	9,525	9,430
Hawaii	32,270	—	11,123	7,643	7,047	6,457
Dist. of Columbia	51,359	19,945	—	20,000	6,097	5,317

*Derived from data in Statement of Policies . . . 1937, Appendix B, Table 3, p. 97; Table 4, p. 98. Notice that the figures here given do not take account of the adjustments that have been made in the allotment procedure because of the failure of the George-Deen Act to authorize the appropriation of sufficient funds to carry out its own provision with respect to minimum appropriations.

**Includes Smith-Hughes funds, 20 per cent of which may be expended for home economics.

on the basis of population. The calculation of the appropriation needed is much simpler under the Smith-Lever plan than under the Smith-Hughes Act, and the plan also seems to be logically more defensible.

Reversion of Unused Funds

Section 15 of the Smith-Hughes Act provides "that whenever any portion of the funds annually allotted to any State has not been expended for the purpose provided for in this Act a sum equal to such portion shall be deducted by the Federal Board from the next succeeding annual allotment from such fund used in such State." In the fiscal year ending in 1936, 47 of the 51 States and other areas to which allotments are allowed reported unexpended balances in one or more of the various fields of service in vocational education. In 33 States and 1 Territory the unexpended balances were 10 per cent or more of the total appropriation in at least one of the fields for which allotments are made. (See Table 8.6). The States and the 1 Territory received their allotments on the basis of minimum appropriations rather than on the basis of the population ratio.

Small unexpended balances may occasionally be expected, especially in States that plan to match the Federal funds only to the extent of the minimum State and local expenditure required by the Act. Unexpended balances of 10 per cent or more, however, probably indicate either an inability or an unwillingness on the part of the State to maintain as large a programme as is contemplated by the Federal allotment. When no part of the allotment is used and the unexpended balance is 100 per cent, as was the case in a few instances, the indication is clear that the State does not care to avail itself of the proffered Federal aid.

The data of Table 8.6 relate to the fiscal year ending in 1936, and of course indicate only the use of funds appropriated under the Smith-Hughes and the George-Elzey Acts. The appropriations authorized under the George-Deen Act more

TABLE 8.6

Percentage of Allotments Unexpended in States and Alaska Reporting Unexpended Balances of 10 Per cent or more, by Field of Service, Year Ended June 30, 1936¹

State	Percentage of allotment unexpended						
	Agriculture		Trades and industries		Home economics		Teacher training
	Smith-Hughes	George-Ellzey	Smith-Hughes	George-Ellzey	George-Ellzey	George-Ellzey	Smith-Hughes
1	2	3	4	5	6	7	
States receiving special allotments: ^a							
Arizona	—	—	50	100	—	—	11
Connecticut	30	100	14	—	—	—	18
Nevada	35	87	11	—	—	—	22
New Hampshire	—	86	11	86	—	—	—
New Mexico	—	—	—	17	—	—	—
Rhode Island	(2)	100	—	—	—	—	20

(Contd.)

TABLE 8.6 (Contd.)

1	2	3	4	5	6	7
South Dakota	52	11	* 18	* 32	—	* 20
Utah	—	—	—	* 26	—	—
Vermont	—	* 48	* 26	* 100	—	* 21
Wyoming	—	—	* 16	—	—	* 14
Alaska	—	* 83	—	* 63	* 57	—
Other States:						
Alabama	—	—	—	34	—	—
Arkansas	—	—	—	16	—	—
California	—	—	—	46	—	—
Colorado	25	—	—	—	—	—
Florida	—	—	—	—	13	—
Illinois	—	—	16	62	—	37
Iowa	18	59	27	31	—	—
Kansas	—	—	70	85	—	—
Kentucky	—	—	27	28	—	10
Louisiana	—	—	16	—	—	—

Maine	15	43	33	63	20	—
Maryland	20	30	13	—	—	11
Massachusetts	—	—	—	—	—	14
Missouri	—	—	13	12	—	10
Nebraska	15	—	43	—	—	—
New Jersey	—	—	—	—	—	33
New York	—	—	—	—	16	19
North Carolina	—	21	13	52	—	—
North Dakota	38	100	—	—	—	—
Oregon	—	13	—	—	—	—
Pennsylvania	—	—	11	—	—	—
Washington	—	—	—	66	—	—
West Virginia	47	—	29	—	—	—

¹ Derived from data obtained from State reports compiled in the Vocational Education Division of the U.S. Office of Education, February 1937.

² Receiving special allotments to guarantee minimum in category in which an unexpended balance of 10 per cent or more appears. See *Digest of Annual Reports of State Boards for Vocational Education*. . . 1936, Statistical and Financial Tables, see, I, Tables 19 and 20.

than double the amounts available to the States. The need for such an increase at this time is open to serious question, when so many of the States are not able to use all the funds provided under the Smith-Hughes and George-Ellzey Acts.

Earmarking of Funds

As previously explained, the acts concerning vocational education have followed the practice of designating appropriations specifically for the reimbursement of salaries of educational personnel in certain limited occupational fields. Prior to the passage of the George-Deen Act only four fields were recognized as suitable for Federal support: Agriculture, trades and industries, home economics, and the training of teachers⁹ in these subjects. The George-Deen Act added a fifth field, distributive occupations. The funds provided are definitely earmarked for each field of training; not only is the use of the funds for training in other subjects forbidden, but there is no possibility of transferring funds from one section of the reimbursed programme to the other.

Present Distribution of Funds. Table 8.7 shows the total appropriations at present authorized under the Smith-Hughes and the George-Deen Acts for each of the fields of service. The table disregards the appropriations that may be necessary to bring the allotments to the States up to the required minimum, and the special appropriations for Hawaji and Puerto Rico, all of which are relatively small compared to the total and would not affect the percentage distribution materially. The table also leaves out of account the amounts authorized to be appropriated for administration in the Federal Office.

Approximately one-third of the authorized appropriations are available for vocational education in agriculture, one-third or a little less for trades and industries, about one-fifth for home economics, about one-tenth for the training of teachers of vocational subjects, and only 6 per cent for distributive occupations.

TABLE 8.7

**Amount and Percentage Distribution of Federal Funds
Appropriated or Authorized to be Appropriated for
Vocational Education, by Field of Service,
Year ended June 30, 1938¹**

[All totals in thousands of dollars]

<i>Field</i>	<i>Total</i>		<i>Amount provided by Acts</i>	
	<i>Amount</i>	<i>Per cent</i>	<i>Smith-Hughes</i>	<i>George-Deen</i>
Total²	\$21,200	100.0	\$7,000	\$14,200
Agriculture	7,000	33.0	3,000	4,000
Trades and industries:				
Maximum	7,000	33.0	3,000	4,000
Minimum	6,400	30.2	2,400	4,000
Home economics:				
Maximum	4,600	21.7	500	4,000
Minimum	4,000	18.9	(3)	4,000
Distributive occupations⁴	1,200	5.7	—	1,200
Teacher training	2,000	9.4	1,000	1,000

¹See Table 2, page 24. Notice that amounts provided for minimum allotments to States, for special grants to Hawaii and Puerto Rico, and for administration in the Federal Office are omitted here.

²The totals include the minimum for trades and industries and the maximum for home economics.

³Of the total appropriation of \$ 3,000,000 for vocational education in trades and industries under the Smith-Hughes Act, not more than 20 per cent may be used for home economics.

⁴The George-Deen funds for distributive occupations are available for teacher training in this subject as well as for instruction of pupils.

During the first 20 years of the programme, from the fiscal year ending in 1918 to the year ending in 1937, the Federal Government expended a total \$121,422,267 on the programme of vocational education (See Table 8.8). Of this amount a little more than two-fifths has been for instruction in agriculture; almost exactly one-third for instruction in trades and industries; and about one-tenth for instruction in home economics. Between one-sixth and one-seventh of the total Federal expenditures has been used for the training of teachers of these vocational subjects.

TABLE 8.8

Amount and Percentage Distribution of Federal Expenditures for Vocational Education from 1918 to 1937, Inclusive, by Field of Service*

<i>Field</i>	<i>Amount</i>	<i>Per cent</i>
Total	\$121,422,267	100.0
Agriculture	49,597,046	40.8
Trades and industries	40,644,150	33.5
Home economics	12,740,431	10.5
Teacher-training	18,440,640	15.2

*Derived from Table 8.2 p. 188. Notice that expenditures for administration in the Federal Office are excluded.

Table 8.9 shows the grand total of all expenditures, Federal, State, and local, for various services in vocational education from 1918 to 1937. Table 8.9 differs from Table 8.8 in that it includes not only the Federal expenditures shown in Table 8.8 but also the State and local funds that have been used in support of the programme.

The distribution of emphasis on the various services authorized under the vocational education acts is a question of

considerable importance. Comparisons of the percentage distributions shown in Table 8.7, 8.8, and 8.9 indicate an interesting way the shift that has occurred in this emphasis.

TABLE 8.9

Amount and Percentage Distribution of total Federal, State and Local Expenditures for Vocational Education from 1918 to 1937, Inclusive, by Field of Service*

<i>Field</i>	<i>Amount</i>	<i>Per cent</i>
Total	\$454,230,929	100.0
Agriculture	135,524,103	29.8
Trades and industries	208,012,882	45.8
Home economics	68,420,139	15.1
Teacher training	42,273,805	9.3

*Derived from Table 8.2, p. 188, and Table 8.3, p. 199. Notice that expenditures for administration in the Federal Office are excluded.

Table 8.8 which presents the grand total of the Federal expenditures, shows that on the average over the 20-year period agriculture has had 40.8 per cent of the total. The George-Deen Act makes a notable shift in this emphasis, as shown in Table 8.7, and Federal appropriations for this field will hereafter be only 33.0 per cent of the total. Table 8.9 shows that State and local communities have also had a different idea about the emphasis on agriculture from that indicated by the Federal appropriation. Although agriculture obtained 40.8 per cent of the Federal expenditures, this field obtained only 29.8 per cent of the grand total of the Federal, State, and local funds used for the vocational programme from 1918 to 1937.

The field of vocational education in trades and industries has been supported by Federal funds equal to one-third of the

total Federal expenditures for vocational education during the 20-year period (Table 8.8). The vocational education acts now in force diminish very slightly the percentage of Federal funds provided for this field (Table 8.7). The State and local communities, however, have supported vocational education in the field of trades and industries more vigorously than the Federal Government.

An examination of the data by years (Tables 8.2 and 8.3) does not reveal any significant trend in the proportion either of Federal funds or of total funds spent on agriculture and on trades and industries. During this 20-year period, however, the share of both Federal and total funds spent for home economics has increased while the proportion spent for teacher training has decreased. In 1937, 14 per cent of total Federal expenditures for vocational education and 16 per cent of Federal, State, and local expenditures were in the field of home economics. The George-Deen Act increases Federal funds for this field to from 19 to 22 per cent of the total Federal funds available.

The relative emphasis placed on teacher training both by Federal and by total expenditures has decreased during the 20-year period. In 1937, teacher training accounted for only 10 per cent of all Federal expenditures for vocational education and 6 per cent of Federal, State, and local expenditures combined. The Federal statutes now in force reduce the relative provision for teacher training to 9 per cent.

Objections to Earmarking for Specific Vocational Subjects. The basic purpose of the designation or earmarking of funds for special types of vocational education is to insure the promotion of those services that are deemed to be of interest from a Federal point of view. The original determination of the types of vocational education encouraged by present Federal appropriations was probably more a matter of political expediency than of sound reasoning concerning the needs of the Nation. An analysis of the influences which finally resulted in the passage of the Smith-Hughes Act makes it clear

that the phases of vocational education for which Federal support was undertaken were those for which well-organized pressure groups existed. That fact has also been evidenced in the enactment of subsequent legislation.

The earmarking of funds for specific types of vocational education is a relatively clumsy device for achieving the purposes of the Federal Government in the support of this programme. A number of rather serious objections may be made to the present designation of vocational fields to be subsidized and the amount allotted to each.

In the first place the amounts earmarked for specific purposes may not have the correct relation to the relative needs for those services. Census data showing the number of persons employed in these broad occupational groupings would certainly not indicate that the amounts of funds supplied for each field should be identical.

The Federal appropriations seem to be based on the conclusion that the needs for education in agriculture and in trades and industries are approximately the same, but the actual support of vocational education in these two fields by the States and local communities throws considerable doubt on the validity of that conclusion. As was shown in Table 8.9 the States and local communities have changed markedly the distribution of emphasis by supplying funds to correct the lack of balance shown in the Federal allocation. This fact, however, cannot be interpreted unequivocally as an expression of judgement regarding the local needs for the various services. Agreement regarding the local needs for the benefit of the rural cultural education is maintained for the benefit of the rural population, and, as has been stated above, the rural communities generally have lower economic ability than the urban centers and are thus able to supply additional local funds less easily than such funds are normally supplied for education in trades and industries in city schools.

It is indeed unfortunate that the Federal grants should be set up in an arbitrary manner without reference to the national

needs for training. If the earmarking of funds is to be followed in the Federal practices, the amounts designated should be determined by careful study of the needs in the various vocational fields that are subsidized, and adjustments in the legislation should be made accordingly. Inasmuch as these needs are constantly shifting, it seems clear that the legislation should not earmark the entire appropriation or any large percentage of it for particular fields of vocational education.

In the second place the earmarking of funds makes it difficult to adjust the programme to meet local and regional needs unless the distribution to the States is on a soundly conceived and flexible basis. State and local trends in the various occupations should affect the distribution of the funds. It may be, for example, that a State has too many people engaged in agriculture, and that education should be an instrument for training some of those who might otherwise become farmers so that they may follow other lines of activity where their efforts will be more useful socially and more productive economically. Shifts in the occupational structure of the population are constantly going on, and should be cared for in the assignment of funds, if earmarking is the practice.

In the third place, earmarking of funds makes difficult the provision of services that overlap two or more fields. For example, some valuable types of vocational training fall between the fields of agriculture and home economics. When the funds for each type of education are definitely specified, those in charge of a subject are likely to be reluctant to take from their allotment the amount necessary to supply borderline types of training. If earmarking is avoided, these services that are important but not yet clearly within any one field can readily be furnished.

In the fourth place, earmarking of funds becomes a device whereby a type of Federal control is extended through governmental machinery from the Federal Office down to the local community. In effect the plan puts the Federal Government in

the position of having something to "sell" to the local community. The local school is encouraged to establish a special type of programme governed by numerous rules and regulations that seem desirable to the Federal agency; in return for the introduction and maintenance of such a programme the local community is reimbursed for a part of its cost by grants from the Federal Government. The plan is very likely to have the effect of killing off the ingenuity of the local community in analyzing its own needs and in determining a programme suitable to those needs. The more specific the earmarking, the less chance there is that the needs of the local community will be accurately determined and suitably served.

It is recognized that the plan of earmarking funds for particular vocational subjects may have been justified at the outset of the Federal programme, in order to indicate clearly the fields that were deemed in need of development. Support could be rallied to the proposed legislation from each of the important social groups that were to benefit—the farmers, the industrialists, the labour interests, and the homemakers. When there is doubt of the wisdom of local leadership, earmarking of funds seems to afford a ready method of accomplishing the objectives that are important from a national point of view. These justifications for earmarking, however, seem much less appropriate now than when the legislation was first enacted.

Careful review of the entire situation in vocational education leads to the conclusion that the designation of the Federal grants for specific vocational subjects is unwise. It would be sounder policy to make the grants only for vocational education in general, and to leave to the States the determination of the specific occupational fields to which the Federal support will be applied. Possibly in the period of transition to this new policy it might be necessary to require a distribution approximating that at present setup in the Federal grants, but the general policy should be to leave the States free to determine their own distribution in the near future, subject to Federal counsel and advice regarding the national interests to be served in the

programme. At the very least, provision should be made for transfer of funds from one field to another.

Earmarking for Vocational Education as Opposed to Grants for General Unspecified Educational Purposes. The issue of the earmarking of funds for specific vocational subjects is related to the much larger question of whether or not Federal grants should be earmarked for vocational education as opposed to general education. The policy of limiting the grants to a particular type of educational service is justified only to the extent that the Federal Government has an interest in this limited type of service to the exclusion of other services for which no funds are provided.

The close connection that exists between vocational education and general education leads inevitably to the conclusion that the Federal Government should have just as much interest in one as the other of these instructional services. Most of the arguments in defense of the support by the Federal Government of vocational education in the full-time school apply also to Federal support for general education. The maintenance of a sound and adequate programme of general education is from many points of view the more important of the two services. In fact, vocational education and general education are inseparable and not clearly distinguishable in a soundly conceived programme.

If Federal grants of sufficiently generous size to guard against any temptation on the part of States and local communities to reduce the programme of vocational education should be provided, it would be of ultimate advantage to the educational system for the Federal Government to forgo any designation of funds particularly for vocational education, and instead to supply funds that may be used for any broad educational purpose. It may be necessary, if such an important change in Federal policy is adopted, to provide for the continuance of approximately the present amount of support to vocational education during a transitional period. There may be some reasons for allowing the designation of Federal funds

for the stimulation or support of special services for a brief period.

If earmarking is abandoned, what assurance will the Federal Government have that the needs which are of national concern will be served? This objective can probably be attained in part by advice and suggestion, without definite specification. Studies carried on through Federal agencies should indicate what the national needs are for vocational education, and what part each State can supply in serving those needs. If the allotments to the States were based on such analyses, the results would serve to suggest to each State the manner in which its programme may be wisely organized. No State probably would wish to deviate far from such a suggested programme, if left to its own choice in the matter, particularly if there is general recognition of the competence of the analyses on which the allotment is based. As a further step, the State might be required in its plan to indicate the approximate division of funds among various educational services.

Bases for Distributing Funds to the States

The allotments to a State for each of the fields of vocational education are based on the ratios of population in the State to total national population in certain classified groups. Different population groups are used for the various fields. For example, the Smith-Hughes Act provides that funds for vocational education in agriculture shall be allotted to each State in the proportion that the rural population of the State bears to the total rural population of the country. Table 8.10 shows for each of the four principal vocational education Acts the population bases used in making the allotments to the States.

Criticisms of Bases of Distribution. It may be presumed that the use of population ratios as a basis for making allotments to the States represents an effort to scale the amounts to the relative needs of each State. It seems clear that the classified population groups on which the ratios are based provide a

TABLE 8.10

Population Groups used as Bases of Allotment of Federal Appropriations for Vocational Education,
by Field of Service and by Act

Act	Population group used as basis of allotment			
	Agriculture	Trades and industries	Home economics	Distributive occupations Teacher training
Smith-Hughes	Rural	Urban	Urban ¹	Total
George-Reed ¹	Farm	—	Rural	
George-Ellzey ²	Farm	Nonfarm	Rural	
George-Deen ³	Farm	Nonfarm	Rural	Total

¹Included as part of the trades and industries field.

²Applied also to Territories.

³Applies also to Alaska, Hawaii, Puerto Rico, and the District of Columbia.

much better measure of the need for a particular kind of education than the total unclassified population would provide. Nevertheless, certain shortcomings may be pointed out in the present method of making the allotments.

In the first place, the present method of distribution does not take into account the fact that the training to be given is limited to certain age groups. The acts specify that the distribution must be made on the basis of the total population classified as either rural or urban, farm or nonfarm. The training programme, however, applies only to that part of the population 14 years of age or older, and most of the training given is customarily supplied to those of adolescent and early post-adolescent years, up to the age possibly of 23 or 25. The age structure of the population varies markedly from State to State, so that the distribution on the basis of total population would not provide funds in amounts at all proportionate to the number of young people to be educated by those funds in each State.

A second criticism of the present method of distribution arises from the fact that the place of residence of an element of the population is taken as an index of the need of that group for particular types of vocational education. This is at best a crude, and at worst a misleading, measure of the need for vocational education. Many young people who live in regions classified by the census as rural or farm should not and will not engage in agriculture when they reach maturity. The fact that present population in rural or farm areas is included in the basis on which the allotment of funds for agricultural education is set up, and is not included in the basis upon which the allotment of funds for trades and industrial education is determined, in practice operates to discourage provision for any types of vocational education except agriculture (and home economics) in those rural regions.

The differential in birth rate between urban and rural populations almost inevitably results in the migration of certain numbers of the farm population. Statistics are available which

show that large numbers of those who are born on farms and obtain their schooling in rural regions later move into an urban environment and engage in some occupation other than agriculture. Some of the vocational education for these migrating elements of the population will undoubtedly have to be given after their arrival in the cities rather than before, although the foundation for vocational education needs to be laid during youth. The basis of the allotment to the States therefore discourages the giving of the types of vocational education in rural areas that are suited to the ultimate needs of a considerable percentage of the rural population.

In the third place, the shifts in the total number of persons required in various types of occupations are not taken into account in the basis of distribution. For example, agriculture is requiring the services of a constantly declining percentage of the total workers of the country. This would seem to indicate that the present number of persons residing on farms is an unsatisfactory basis on which to plan a suitable programme of training for the oncoming generation of agricultural workers.

In the fourth place, distribution on the basis of population assumes that the financial support needed is determined solely by the number of people, whereas other factors, such as the unit cost of the training and the length of time needed to prepare a pupil for the occupation, also affect the total cost of a programme. Furthermore, the per capita amount of the distribution to the States for agriculture is markedly larger than the per capita amount for trades and industries when the total appropriations for the two fields are approximately equal, because the urban population is more numerous than the farm population. The fact that the farm population in a given State is 5 per cent of the total national population living on farms and the urban population of the same State is 5 per cent of the total national urban population is not sufficient warrant for deciding that the amounts needed for the support of vocational education in agriculture and in trades and industries should be equal in that State.

Equalizing Effect of Present Allotments. Another important consideration in appraising the present plan of allotting funds to the States is the degree to which equalization among the States is accomplished. Though the distribution possibly does afford some small amount of equalization of educational opportunity, in that funds are provided on a population basis in excess of the support that presumably would otherwise be provided by the State, the programme does not take into account the factor of equalization of burden among the States in any purposeful manner. This failure to equalize the burden may be clearly brought out by an analysis showing the kinds of States that obtain the largest amount of grants on each of the bases used in allotting funds for vocational education.

In that part of the programme of vocational education in which funds are allotted on the basis of urban population, one-half of the total Federal appropriation to the 48 States goes to 6 States, all but 1 of which rank in the highest third of the States according to ability to support education.¹⁰ In that part of the programme in which funds are allotted on the basis of nonfarm population, one-half of the total Federal appropriation goes to 7 States, all but 2 of which rank in the highest third of the States according to economic ability. In that part of the programme in which funds are allotted on the basis of the total population, one-half of the total Federal appropriation goes to 10 States, only 3 of which rank below the highest third in economic ability.

The other two bases used in the Federal allotment, farm population and rural population, afford a somewhat better distribution to the States on the basis of ability. One-half of the allotment on the basis of rural population goes to 13 States, all but 5 of which are in the lower half of the list according to economic ability. One-half of the allotment on the basis of farm population goes to 12 States, all but 3 of which rank in the lower half of the list according to economic ability.

It must be recalled that the matching provision of the Federal appropriations also produces results contrary to the

principle of equalization of burden. Thus the States having the lowest per capita wealth and income must qualify for the allotment from the Federal Government by use of State and local funds in just as large an amount per capita as is demanded from the more able States.

Conclusion. It seems clear from these analyses that the bases of distributing funds to the States for vocational education needs reconsideration. The chief criticism of the present arrangement is that the funds are not distributed on an equalization basis. Though there is some measure of equalization in the population bases employed in the vocational acts, they fall far short of distributing the funds to the States according to their financial needs.

Another important difficulty is that the formula for distribution of the funds is written directly into the acts for vocational education. This makes for inflexibility. It would be preferable for the statutes to lay down only a few general principles on which the distribution must be based, such as the requirement that the allocation must be just and fair, that it shall be based on the needs of the States, and that it shall make use of some formula based on objective data.

Authority for the actual determination of the allotments within the limits of these principles might well be assigned to the Commissioner of Education, subject to final review by the Secretary of the Department of the Interior or other department to which the Office of Education might in the future be assigned. In developing the formula for distribution the Commissioner of Education should be required to consult with a representative group of advisers. Perhaps the Council of Chief State School Officers would be a suitable group to advise him in developing the distribution formula.

If Federal funds are provided for general education, and earmarking for vocational education is continued, a single agency should make the allocations for both types of funds.

Division of Support between States and Local Communities

Of the grand total expenditures, amounting to \$33,427,834,¹¹ required in 1936 to support the Federal programme of vocational education, 29 per cent came from the Federal Treasury, 26 per cent from the treasuries of the States and Territories, and 45 per cent from local sources. Table 8.11 shows for each of the 51 States and other areas the percentage of total expenditures for vocational education provided from Federal funds, from State funds, and from local funds, in the fiscal year ending in 1936.

Because of the matching requirements the expenditures from Federal sources in 1936 could not exceed 50 per cent of the total. Three States provided nothing beyond the required 50 per cent from State and local funds. In 23 States and Puerto Rico the Federal funds constituted 40 per cent or more of the total expenditures for the programme of vocational education. In 4 States the Federal funds provided less than 20 per cent of the total, and in one of these States the Federal funds amounted to only 9 per cent of the total.

There are only 1 State and 2 Territories in which the funds provided from State or Territorial sources in 1936 were more than half the total required for the support of the programme of vocational education. In 4 other States the amount from State sources was in excess of 40 per cent of the total expenditures. Fifteen States provided 10 per cent or less of their totals from State funds.

In 1936 the burden of financing the programme of vocational education fell much more heavily on the local communities than on either the Federal Government or the States. In 1 State 80 per cent of the total expenditure required was provided from local sources, and in 9 other States half or more of the total was provided from local sources. In only 2 States and in Alaska, Hawaii, and Puerto Rico was less than 25 per cent provided by the local communities. In 29 States the local communities bore a larger percentage of the cost than the Federal Government.

TABLE 8.11

Percentage which Federal, State, and Local Funds are of
Total Expenditures for Vocational Education, by
State, Year ended June 30, 1936*

State or Territory	Federal Percent- age	State and local percentage		
		Total	State	Local
1	2	3	4	5
Total	29	71	26	45
Alabama	42	58	14	44
Arizona	26	74	19	55
Arkansas	49	51	18	33
California	26	74	26	48
Colorado	38	62	18	44
Connecticut	17	83	65	18
Delaware	45	55	20	35
Florida	31	69	27	42
Georgia	40	60	11	49
Idaho	45	55	15	40
Illinois	36	64	11	53
Indiana	25	75	10	65
Iowa	49	51	3	48
Kansas	37	63	16	47
Kentucky	44	56	8	48
Louisiana	50	50	6	44
Maine	50	50	23	27
Maryland	32	68	9	59

1	2	3	4	5
Massachusetts	9	91	47	44
Michigan	36	64	20	44
Minnesota	39	61	17	44
Mississippi	30	70	24	46
Missouri	44	56	24	32
Montana	38	62	9	53
Nebraska	42	58	13	45
Nevada	49	51	19	32
New Hampshire	48	52	14	38
New Jersey	33	67	41	26
New Mexico	41	59	9	50
New York	19	81	35	46
North Carolina	42	58	16	42
North Dakota	49	51	19	32
Ohio	32	68	14	54
Oklahoma	49	51	5	46
Oregon	46	54	10	44
Pennsylvania	25	75	41	34
Rhode Island	43	57	10	47
South Carolina	33	67	49	18
South Dakota	34	66	4	62
Tennessee	44	56	12	44
Texas	26	74	26	48
Utah	36	64	9	55

(Contd.)

TABLE 8.11 (*Contd.*)

1	2	3	4	5
Vermont	50	50	3	47
Virginia	36	64	32	32
Washington	43	57	28	29
West Virginia	43	57	8	49
Wisconsin	17	83	3	80
Wyoming	36	64	18	46
Alaska	37	63	53	10
Hawaii	22	78	78	0
Puerto Rico	46	54	31	23

*Data derived from Digest of Annual Reports of State Boards for Vocational Education . . . 1936, Statistical and Financial Tables, sec. I, Table 8.7.

Within the States that do not have provision for large State funds for equalizing educational opportunities, the Federal allotment for vocational education serves to increase the inequalities of educational opportunities. The local communities that have the greatest economic ability usually have the best system of general education. These are the communities that can afford to set aside funds for vocational education. Under such circumstances it seems that there is a strong tendency for the Federal funds ultimately to be used for the most part in communities that are above average in economic ability.

The States seem to have tended to limit the establishment of centers for reimbursed vocational education to the types of communities on which the allotment is based. For example, the George-Ellzey appropriations for home economics were based on rural population, and classes in this subject seem to have been established chiefly in rural areas. The allotment for

vocational education in trades and industries is based on urban or non-farm population, and such classes are typically established only in cities. As previously pointed out,¹¹ this restriction of the programme is not required in the acts and possibly is unwise socially.

Perhaps the most pronounced adverse criticism concerning the distribution of funds within the States is with respect to the service to minority groups in the population. The States maintaining segregated schools for Negroes have in general apportioned to the support of training for Negro groups less than half the amount of their total Federal allotment for vocational education that would be indicated by the percentage which the Negroes are of their total population. The needs of the Negroes for vocational education, furthermore, are probably greater than is indicated by the percentage they are of the total population. It seems also that as the Federal funds have increased, the percentage going to Negro schools within the State has decreased. This situation suggests the need for some kind of stipulation in the act requiring a just and equitable distribution of funds within the State. Such requirement was made in the Second Morrill Act and the precedent set there seems to have worked with reasonable satisfaction.

NOTES AND REFERENCES

1. U.S. Office of Education, Bulletin, 1937, No. 2 [Advance Pages], Biennial Survey of Education in the United States: 1934-36 (Washington: U.S. Government Printing Office, 1938), Vol. II, ch. II, p. 94. Includes expenditures in summer, night, and part-time and continuation schools when separately reported.
2. The total expenditures for public secondary schools in the United States for the year 1935-36 is estimated roughly as about \$760,000,000. This estimate is based on data obtained from Biennial Survey of Education in the United States: 1934-36, Vol. II, ch. II.
3. Sec. 9.
4. National Resources Committee, Public Works Planning, p. 170.

5. National Advisory Committee on Education, Federal Relations to Education, Report of the National Advisory Committee on Education (Washington: The Committee, 1931), pt. 1, Committee Findings and Recommendations, p. 33.
6. Statement of Policies . . . 1937, appendix B, Table 4, p. 98.
7. U.S. Office of Education, Vocational Division, Digest of Annual Reports of State Boards for Vocational Education to the Office of Education, Division of Vocational Education, Fiscal Year ended June 30, 1936 (mimeographed), Statistical and Financial Tables, sec. I, Tables 19 and 20.
8. Notice, however, that under the procedure now followed the allotments made on the basis of population have been slightly reduced in order to be able to comply with the minimum provisions of the Act. See Table 3, footnote 1.
9. In the case of the training of vocational teachers the reimbursement is not limited to salaries.
10. See Paul R. Mort, Eugene S. Lawler, and associates, Principles and Methods of Distributing Federal Aid for Education. The Advisory Committee on Education, Staff Study No. 5 (Washington: U.S. Government Printing Office, 1938), Table 10. The yield of the uniform tax plan there given was divided by the estimated number of children 5-17 years of age for each State. Estimates of the number of children 5-17 years of age were computed by taking the arithmetic mean of estimates for July 1, 1934, and July 1, 1936, obtained from the United States Office of Education.
11. This total includes an undistributed item of State and local expenditures of \$1,665, which is not included in the total given in Table 8.3, p. 192.

Vocational Education and Modern Society

Every citizen in a modern democracy should be equipped to contribute effectively to the welfare of the group. Only when each individual produces the maximum of which he is personally capable can the highest possible welfare of the group be achieved. Under any circumstances the number of citizens who will have sufficient resources to support themselves without engaging in productive work will be small. Thus on practical as well as theoretical grounds, and from a social as well as from an individualistic point of view, it is necessary to equip every young person for some occupation so that he may contribute effectively to the satisfaction of human wants. Improvements in the educational equipment of the individual so that he may make a greater contribution than he otherwise could to the productive needs of society should result in the long run in the improvement in the general welfare of the entire group. There is need, of course, to see that the types of production¹ for which individuals are equipped are those for which society has real need.

All societies, even the most primitive, recognize the necessity of this preparation of the young for participation in

economic production. In a social order characterized by highly mechanized industrial processes and a highly complicated system of production, the preparation of workers for their jobs becomes concomitantly complex. The individual worker must possess some skill or competence that he may sell on the labour market if he is to enjoy the highest personal development. Society as a whole is vitally concerned to see that an adequate supply of well-qualified workers is available in sufficient numbers to carry on the necessary productive enterprises. The matter of the proper choice of an occupation in which to engage is of great importance to the individual and the composite results of such choices by individuals are of vital significance to the entire social order.

These considerations make it evident that by some means society must equip every one of its citizens with the skills and information necessary for the individual to contribute most effectively to the welfare of the group. The agency through which society will provide this equipment is a matter of some concern.

The Public School as an Institution for Vocational Education

In earlier times preparation for a vocation was largely a private affair, carried on in the home or by an apprenticeship system. In the past half century, under the increasingly complex organization of industrial society, the responsibility for much of the vocational preparation has been transferred to the school system. It should be emphasized that this is a task which the schools themselves did not originally seek. Pressures from outside the school system have been largely responsible for the introduction of programmes looking toward the preparation of young people for vocational efficiency. Enough experience has now accumulated to demonstrate the feasibility and the efficiency of providing in the schools some of the training required for a large number of vocations.

The maintenance of an adequate school system under public control and with public support is unquestionably a

necessary function of government in a democracy. The same line of reasoning that has been followed in developing the system of general education under public control and support seems to point toward the desirability of affording opportunities for vocational education under public auspices. The fact that general and vocational education should not and cannot be separated in an effective programme for the individual child inevitably means that the agency responsible for conducting the one must also conduct the other phase of the educational service. Vocational education, like all other forms of education, is an individual matter insofar as the learning process is concerned, but society as a whole has a most important stake in the enterprise. Society cannot leave to the chance interests of individuals or corporations the provision of this training that is so vital to the general welfare.

The public school is organized as a democratic, classless institution, serving the entire population; in a democracy it seems entirely appropriate to assign responsibility for vocational education to such an institution. A considerable measure of public control over the programme of vocational education seems socially desirable. Even though industrialists were willing to provide the training necessary for workers in their own plants, the profit motive would make it extremely probable that the form of training and the number to be trained would be determined in many cases by the immediate needs of the industry rather than by the ultimate welfare of the workers. In a democracy the government is the agency which is looked to for the development of services in which there may be a conflict of public and private interests.

Organized labour has been particularly clear in its pronouncements to the effect that vocational education must be provided under public control. As previously pointed out the American Federation of Labour gave its support when the movement for vocational education was in its infancy.

The motives of organized labour in thus lending its support to the movement are well shown in the literature of the period.

Prominent was labour's traditional zeal for education, particularly for making it universal and available to all children. Another important factor was labour's preference to have agencies of concern to the general welfare conducted as far as possible under public auspices. Labour regarded vocational education as a reasonable adjunct to the public school system. It found undesirable the growing practice of private proprietary trade and vocational schools which were recruiting the children of the workers for the sake of private profit without regard to their educational well-being, their future in industry, or their development as citizens. Labour was also critical of the development of training schools owned and operated by corporations which expected to employ those who completed the training.

Organized labour gave vocational education under public auspices constructive, consistent, intelligent, and unremitting support. Any lessening of the alertness of organized labour in protesting trends that have altered somewhat the original conception of vocational education may be attributed to the implicit faith of the labour group in the vision and integrity of the educators in responsible charge of the programme.

The dissatisfaction that labour has recently expressed with certain phases of the management of the Federal programme of vocational education has been emphasized in an earlier connection.³ It is important to note that organized labour has been able to obtain a hearing for its point of view in official quarters in the States and Nation and to enlist official effort for the correction of unsound policies in vocational education. Only because the programme is conducted under public auspices has it been possible to stimulate prompt and vigorous effort to change the unsound conditions. If there had been no Federal aid for vocational education, if the provision of the training for occupations had been entirely a matter of individual and private enterprise, the unsound conditions that have been so justly criticised would inevitably have been of much more widespread development, publicity regarding them would have been relatively ineffective, and their correction

would have been difficult or impossible. It is indeed fortunate from the point of view of the general welfare that there is widespread participation of public agencies in the support and control of the programme of vocational education.

Regardless of the amount of education for occupational purposes that is provided by the school, it is inevitable that a certain amount of training must be given on the job. The final stage of the adjustment of the worker to the demands of his occupation must in most instances take place in the employment situation rather than under some remote environment such as the classroom or the school shop. It seems appropriate for the schools to carry the training of the prospective worker up to the point where certain generalized skills and information, of value in a variety of actual working situations, are acquired. Additional training needed for adjustment to a particular job in a particular industrial establishment can well be assigned to the industry itself.

Apprenticeship

Historically the most important avenue of preparation for vocations has been apprenticeship. In some trades the coming of the machine-type of industry diminished the need for all-round skilled craftsmen, and apprenticeship fell into disuse. In most of the trades, however, apprenticeship has never become firmly established in the United States, largely because immigration has brought in a sufficient supply of skilled workers from Europe. With the recent restrictions on immigration this supply has been cut off, and there has come a realization of the need for developing an American programme of apprentice training in those trades for which it is appropriate.

The need for a programme of apprentice training has been further demonstrated by conditions arising during the economic depression. With the reduced opportunities for employment, the taking on of new apprentices was almost discontinued in a great many lines in which this method of training had previously been used. Statistics gathered in connection with

the administration of the Social Security Act indicate that a considerable percentage of the skilled workmen of the country will reach retirement age within a few years. This fact is further indication of the necessity of provision for replacements through apprentice training.

A Federal Committee on Apprentice Training was created by Executive order in 1934¹ to promote apprentice training under the National Recovery Administration codes, to prevent the exploitation of apprentices and the breakdown of labour standards, to insure adequate training on the job, and to prevent overcrowding in certain skilled trades. This agency was continued under the National Youth Administration after the National Industrial Recovery Act was declared unconstitutional. The Fitzgerald Act, approved August 16, 1937,² establishes a permanent unit for apprenticeship in the United States Department of Labour and authorizes the appointment of an advisory committee representing the various interests affected by the programme.

Apprenticeship may be defined under modern conditions as learning a trade on the job under the direction of skilled workers, and according to specifications set up by employers and by organized labour in that trade. It is designed for a limited number of young people—for those who, according to the best judgement of the trade, are needed to maintain its supply or to meet its demand for all-round, highly skilled workers, and who afterwards can be reasonably certain of steady employment in the trade. The number of apprentices to be taken on is determined by joint committees representing labour and employers.

Apprenticeship is conducted according to definite standards, with the wage rates specified in a written agreement signed by the apprentice and his parents or guardian and by the employer. The agreement also stipulates the duration of the apprenticeship—usually from 3 to 5 years—with a specified number of hours of work experience and with a definite schedule of processes to be learned on the job. Related training in the schools is

required, the hours and arrangements for attendance on such instruction being determined locally. Upon completion of his apprenticeship, the apprentice is expected to step into a job in the trade.

Some governmental supervision over apprenticeship is necessary, first in order to stimulate the development of a national system of apprenticeship, second to assist employers and organized labour in working out suitable standards for each trade, and third to supervise the contractual relationships between employers and apprentices. A national system of apprenticeship regulation, worked out in co-operation with States and localities, is necessary in order that uniform standards may be developed. In a mobile population, with workers freely and frequently crossing State lines to seek employment or to take jobs, some understanding about uniformity of standards on a national basis is essential.

The governmental supervision over apprenticeship rightfully belongs in the Federal and State departments of labour, inasmuch as the problems involved have to do with working conditions and are centered at the place of employment. The apprentice will, of course, come under the jurisdiction of the schools as a service agency for such related instruction as he may be required to obtain, but the general oversight of the apprenticeship programme does not belong to the schools.

The Federal service up to this time has been instrumental in developing and carrying through to adoption national apprenticeship standards in two trades, and in about a dozen others the standards are in process of development. This work has only begun, for there are at least 75 trades for which national apprenticeship standards should be prepared and adopted.

A few States have set up agencies for the promotion and supervision of apprenticeship programmes. There is great need for the extension of such agencies into States and local areas where they do not now exist. The Federal apprenticeship office

rightly conceives as one of its functions the stimulation of State and local committees interested in the development of apprenticeship programmes.

Apprenticeship has the advantage of entailing relatively little direct public expenditure. The cost of the training, so far as the learning on the job is concerned, is borne entirely by the industry and by the apprentice. Related training, as explained above, is necessary in the schools, but this is not nearly so expensive per person served as the all-day programme of vocational education. Some appropriation of public funds is needed for the governmental organization responsible for stimulating arrangements for apprenticeship and for supervising the contractual relationships. The unit now set up in the Federal Department of Labour operates under the handicap of a very limited budget; a larger appropriation for this purpose is clearly justified and should produce important results in terms of opportunities for young people to prepare for vocations.

The apprenticeship plan undoubtedly has considerable merit and the attempt to revive it at this time should be looked upon with favour. In the nature of the case, however, apprenticeship will be suitable to the needs of a relatively small percentage of the workers who must be trained. Even under the apprenticeship system the schools have the function of providing preliminary education prior to the indenture and some follow-up training while the young person is serving his apprenticeship.

Apprenticeship, although suitable for some trades which employ large numbers, would seem to be a particularly appropriate method for training in those occupations which employ only a small number of skilled workers. For such occupations the programme of vocational education in the schools cannot be economically arranged. Apprenticeship, however, being wholly individual in its instructional methods, can be arranged just as suitably for small numbers of trainees as for large numbers.

Types of School Programmes for Vocational Education

Although a large share of the training required for certain occupations must still be given in close association with the actual job, experience has demonstrated both the necessity and the efficiency of providing some pre-entry training for a large number of vocations. The schools may organize for the giving of vocational education⁴ in at least three ways: The all-day school; the part-time co-operative plan; and the part-time or evening classes.

All-day School Programmes. Inasmuch as the school is set up primarily to deal with young people, much of its service in preparing for vocations will necessarily come prior to the young person's entry on productive employment. This type of vocational education is sometimes designated as pre-entry training, and the service may be arranged in the all-day school programme.

Vocational education of the pre-entry type seems particularly appropriate in the all-day school in case a relatively large amount of intellectual content is required for the successful pursuit of the vocation. In a field such as agriculture, for example, there is a voluminous body of informational content to be mastered, and the all-day programme of the schools seems to provide a very suitable agency for carrying on the required instructional activities.

Co-operative-type Programmes. A second type of school programme for vocational education is sometimes referred to as the co-operative plan. Under such an arrangement the pupil goes to school for about half his time and engages in some productive employment assigned through the school the remainder of his time. Plans have been worked out, for example, under which pupils are paired, so that while one member of the pair goes to school, the other works at the job. At the end of a fixed period the members of the pair change places; thus the educational programme and the job are carried on without interruption. Both the school work and the employment can be

related effectively to the type of occupation in which the young person expects eventually to engage.

In the co-operative type of programme great care must be exercised to insure that sound labour standards are maintained, and that pupils are protected from exploitation. The number of employers who are willing to co-operate with the schools on a basis beneficial to the pupils and not detrimental to labour standards is in most communities very limited, for the use of co-operative-plan trainees in such a way as to give them desirable training is frequently expensive to the employer. In many cases the wages paid to co-operative-plan trainees are so low as to constitute an exploitation of the pupils as well as a menace to sound labour standards in the community. This seems particularly true of co-operative-type programmes in which students are placed on jobs before they reach the age of 18. Although the development of co-operative type programmes in vocational education seems promising, it must be guarded carefully, and it seems probably more suitable to the junior college than to the high school level.

Part-time and Evening Classes. A third type of programme in vocational training involves the maintenance of classes on a part-time basis or in evening schools, for those who are engaged in full-time employment. The services of the schools may be either for the purpose of improving the worker in the line of employment in which he is engaged, or for equipping him with skill in some other occupation. Related training on a part-time basis for apprentices is an example of this type of programme in the schools.

The types of instructional content contained in the part-time or evening school classes do not differ greatly from those for pre-entry training or the co-operative-type programme. The organization of the instructional programme for the full-time employed worker, however, necessarily must be much more flexible than that in either of the other two types of vocational training.

Effect of Occupational Distribution on Demands for Vocational Education

The various occupations require widely different amounts of preparation, ranging from unskilled jobs for which the pre-entry training is negligible up to the professions such as medicine, law, and teaching, which require long years of preparation. The amount of training required in a given situation depends in part on the occupation for which the person is preparing, and in part on the special capabilities of the learner. Requirements of economy dictate the necessity for guiding learners into types of occupational preparation for which their abilities are suited; otherwise there is certain to be waste in the training process and delay and discouragement for the individual learner.

With the increase in technology that is rapidly taking place in industrial society, the number of positions in the sem-skilled occupations may be expected to increase, but at the same time there will probably be a decrease in the number both of the highly skilled positions and of the entirely unskilled jobs. In the place of some of the unskilled workers and skilled craftsmen, there may be expected workers of the machine-tender type, who are skilled at repetitive processes dealing with a very small fragment of the entire productive enterprise.

Table 9.1 shows the percentage of gainfully employed workers in the United States in 1910, 1920, and 1930, classified in each of the major socio-economic groups. It will be noted from this tabulation that the percentage of unskilled workers has been decreasing, while the percentage of semi-skilled workers has been increasing slightly. The greatest increases are in the classifications of clerks and kindred workers and in the professional group. The percentage of farm owners and tenants has been decreasing sharply, but non-farm proprietors have been increasing.

These trends have important implications for the programme of vocational education. The general implication is

that, although the demands for vocational education will show pronounced shifts in the future, the total amount of training needed for occupational efficiency is almost certain to increase.

TABLE 9.1

**Percentage Distribution of Gainful Workers in the
United States by Socio-economic Group,
1910, 1920, and 1930***

<i>Occupational group</i>	<i>Percentage distribution</i>		
	<i>1910</i>	<i>1920</i>	<i>1930</i>
Gainfully employed, 10 years of age and older	100.0	100.0	100.0
White-collar and proprietary	37.0	40.7	42.1
Professional persons	4.3	4.9	6.0
Proprietors, managers, and officials	22.7	22.1	19.8
Farmers (owners and tenants)	16.1	15.3	12.3
Nonfarm proprietors	6.6	6.8	7.5
Clerks and kindred workers	10.0	13.7	16.3
Manual workers	63.0	59.3	57.9
Skilled workers and foremen	12.6	14.3	14.0
Semiskilled workers	19.2	20.0	20.9
Unskilled workers	31.3	24.9	22.9

*Adapted from Bradford F. Kimball, *Changes in the Occupational Pattern of New York State*, New York State Education Department, Educational Research Studies, 1937, No. 2 (Albany: 1937), Table 7, p. 38. Data refer to continental United States only.

Need for an Occupational Outlet Service

The Table 9.1 indicates in a general way certain broad shifts in occupational distribution that are of importance for the future programme of vocational education. A much

more detailed analysis is needed, however, to plan wisely the programme of occupational preparation. The organization of the information that is needed for this purpose might take the form of an occupational outlook service.

Information Needed. Intelligent planning for a programme of vocational education should be based on a knowledge of the occupational situation throughout the country. The specific items on which information should be available for an occupational outlook service are as follows:

1. A classified list of all the types of jobs at which people work in the United States.
2. The pre-entry requirements for each of these classified jobs, in terms of training, personal characteristics, and experience.
3. The number of persons in the country engaged at each of these types of jobs.
4. The number of new entrants to each type of job that are required each year.
5. A forecast of the probable average number of new recruits needed in each of these types of jobs for each of the next 5 years, to be obtained by analysis of economic, technological, and other factors that would influence employment in the various types of enterprise.
6. The number of persons now in training for each of the classified types of jobs.

Information of the foregoing six types should be available not only for the country as a whole, but separately for each State and for the larger population centers in each State. From these factors a forecast of occupational outlook could be constructed which would be of immense value to the programme of vocational education.

The service would be somewhat similar to the crop outlook now provided by the Department of Agriculture. The establishment of an occupational outlook is no more visionary than

the establishment of the crop outlook was when it was first advocated, some 20 years ago. The task of preparing the occupational outlook would in some respects be more difficult than that of preparing the crop outlook, for the number of classifiable types of jobs is very large compared with the number of different kinds of crops to be reported on. In other respects, the occupational outlook service might be a simpler matter than the crop forecast, for the controlling factors are probably fewer in number, and being mostly man-made, should be more readily predictable.

Difficulties of Developing a Service. The immediate difficulty in the development of an occupational outlook service is the unavailability of the necessary data. In none of the six types of information previously suggested as needed for occupational forecasting are adequate data now available.

One of the items of information that is basic to the occupational outlook service is a list of well-defined and classified jobs, describing the vocations in which people are employed in the United States. The number of such jobs is very large and their identification and description correspondingly difficult. The United States census of 1930 utilized approximately 17,500 occupational designations. The United States Employment Service is now engaged in the process of compiling an occupational dictionary to standardize as far as possible the job designations used in the placement service. Up to the present this agency has catalogued and described some 18,000 different occupations. It is estimated that the total number, when the list is completed, will be somewhere between 20,000 and 25,000. Although the list of occupations which individually employ as many as one-tenth of one per cent of the employed workers of the country would not be very long, the large number of occupations in which relatively small percentages of the population are engaged employ in the aggregate a large number of persons and are of great importance to the general welfare.

Even after a satisfactory classification of occupations is made, an analysis of the training requirements for each type of

job is a large undertaking. Although a beginning has been made on such a project by the United States Employment Service, at the rate the work is now proceeding it will be many years before the desired information is available. One of the immediate needs is for the early completion of this important file of information. The kinds of jobs and the training requirements for each are likely to shift from time to time, so that when once the file of information is completed there must be constant effort expanded to keep it up to date.

At present there is no authoritative tabulation of the number of young people preparing for each classifiable type of occupation. Such compilations as exist are fragmentary, inaccurate, and are usually not set up in accordance with a suitable classification of occupations; they are therefore not particularly useful for the purposes of an occupational outlook service.

Perhaps the area in which the least information is available is that of the present and prospective needs of the economic order for workers in various occupations. At present the United States Employment Service has some current data on labour shortages and surpluses, and is able to furnish some information with regard to current conditions in a few of the major lines of employment. This service is not, however, sufficient to forecast whether or not there will be shortages in any given occupation over a period of a year's time. The Bureau of Labour Statistics has done much by way of compiling information on the labour situation and current economic conditions. An effective forecast of future conditions, however, requires much more extensive economic information than so far has been mobilized. The difficulties involved in any long-range forecasting of economic conditions are well recognized, and there is no assurance that this problem can ever be completely solved. It should be possible, however, to make estimates on a reasonably intelligent basis that would represent an improvement over the present lack of such information.

The recently published report of the Subcommittee on Technology of the National Resources Committee makes the

following recommendation regarding the preparation of information of a type that would be useful in developing an occupational outlook service:

A special case of the influence of invention is technological unemployment. It is recommended that a joint committee be formed from the Department of Labour, the Department of Commerce, the Department of Agriculture, Bureau of Mines, Interstate Commerce Commission, Social Security Board, and the Works Progress Administration with such other co-operation as may be needed, for the purposes of keeping abreast with technological developments and ascertaining and noting the occupations and industries which are likely to be affected by imminent technological changes and the extent to which these inventions are likely to result in unemployment. It is recommended that such information be made available through the appropriate departments to the industry and labour likely to be affected.⁵

It may be suggested that there are few areas of Federal statistical service so greatly in need of improvement as the collection of occupational statistics. Occupational planning will probably continue to be extremely ineffective until a much better foundation is provided in the census data. Perhaps the census of 1940 may be the earliest opportunity to secure great improvement, and it is not too early to begin the planning of the necessary modifications.

Value of a Service. The publication of the data concerning the occupational outlook would provide a most valuable service. Only by the accumulation of such information can vocational guidance be given effectively. The oncoming generation of workers will distribute themselves intelligently among the available occupations only if they are provided with information showing the relative demands in the various types of unemployment. To be most effective in this respect, the occupational outlook forecasting service would have to be of a rather long-range character, since pupils who are making choices as to their

training need information as to the probable employment conditions from 2 to 5 years in advance.

The occupational outlook service would not operate in any way to coerce any person to engage in any occupation, nor to deny individuals the right to choose the occupation they wish. The data would be merely a guide by which the individual could choose most wisely and could be advised most intelligently with regard to his own personal choice of a occupation.

The information would also be of value in setting up the programme of vocational education, for the amount of funds required for the support of the various types of training and the needs for other instructional facilities could be set up rationally in accordance with the demands for trained workers in each classifiable line of employment. Present facilities for vocational education, both as carried on under the Federal grants-in-aid and as carried on by States and local communities without Federal subventions, have almost universally been set up without the benefit of information concerning the needs for occupational training. As a result it appears that in many instances high schools have encouraged entirely too many pupils to enroll in courses preparing for certain vocations. This has perhaps been more evident in courses preparing for office occupations than in other fields of vocational education. The lack of suitable occupational information has thus resulted in a waste of public funds and in a disappointment to the young people who were prepared for jobs that did not exist.

Probably there should be an annual release of the figures on the occupational outlook. The most advantageous time of the year for the release of these figures would be late in the spring, at the time when pupils are determining their programmes of classes for the following school year.

The information regarding the occupational outlook would be of value both to the employer group and to the labour group. Employers could judge well in advance what the supply of

labour would be and enterprises would not be handicapped by unforeseen shortages of workers in particular lines. Labour, for the first time, could be assured of an equitable distribution of training that would largely prevent a disturbing oversupply of workmen in any of the fields of employment for which vocational education is given.

The need for an occupational outlook service is further emphasized by the cries that were raised recently regarding a supposed shortage of skilled workmen. Industrialists who were consulted on this problem in the spring of 1937 were convinced that a distressing shortage of skilled labour existed at that time. Many leaders in the field of organized labour were equally convinced at the same time that there was no shortage. A dispute regarding a fact of such importance could readily be settled on an objective basis by a governmental agency charged with the responsibility for tabulating data on the situation. There is little disagreement about the size of the prospective wheat crop or corn crop; the crop outlook service is widely accepted as an authoritative statement on such matters. A similar statement on the occupational outlook would do much to relieve the anxiety both of labour and of industry regarding the supply of skilled workers.

Assignment of Administrative Responsibility. The location of administrative responsibility for the preparation of a report on the occupational outlook is a matter of some importance. The whole project has only a secondary relation to the educational programme; it is primarily a problem of collecting and analyzing social, economic, industrial, and technological data. Under present governmental organization it would seem that the Bureau of Labour Statistics in the Department of Labour is the logical agency to take charge of the proposed occupational outlook service.

Groups to be Served by Vocational Education

The groups of people to be served by a programme of vocational education may be classified on several bases. A useful

type of analysis is based upon a classification by age and school status, or by extent of employment experience. A classification of needs on the basis of individual abilities may also be considered. A classification on the basis of residence yields certain valuable implications for the programme of vocational education.

Need for Vocational Education of Groups Classified by Age and School Status. As a general principle it seems a sound policy to give the specialized phases of education for a vocation as near as possible to the time in the experience of the individual when he will actually enter on the vocation. The cold storage notion of education, which regards training as something that can be acquired and laid up for future use, is not favourably regarded by modern educators. In the first place, it is difficult for a learner to maintain an interest and to acquire satisfactory competence in a type of work in which he will not engage for many years. In the second place, much of the information and skills when once acquired do not remain with the individual unless he has a chance to exercise them. In the third place, changes in the requirements for proficiency in the occupation take place so rapidly that any long delay between the training and the entrance on employment is likely to result in a considerable obsolescence in the equipment of the individual. It seems important, therefore, to insist that whenever training for a specialized vocational purpose is provided it shall be given to the individual just as near as possible to the time at which he enters an occupation.

On the basis of age and relationship to school systems, five classes of people may be clearly distinguished as having need for vocational education: (1) The group of young people attending the full-time secondary schools, generally from 16 to 18 years of age, with some at ages 14 and 15; (2) those attending a school of post-secondary level, such as a junior college or technical institute, most of whom are from 18 to 20 years of age; (3) the group of young people who have recently left the full-time school for their first regular employment experience; these are for the most part between the ages of 16 and 25,

although in States in which the compulsory school attendance age is below 16, there will be some 14- and 15-year-old children in this group; included in this group are the unemployed youth who have recently left school; (4) the older adult group who have been out of contact with the full-time school for a considerable period; this group includes both those employed and those unemployed; (5) those who are physically disabled and require training for vocational rehabilitation.

It will be noted that in this grouping no arrangements are considered for vocational preparation for pupils below the upper years of the secondary school. It is generally recognized that the elementary and junior high school periods should be devoted exclusively to general education, including exploratory and diagnostic experience that may provide help in the wise choice of a vocation or in the selection of future types of training to be received. Under modern conditions young people do not generally enter on employment before age 16 or 18; the specific types of vocational education can well be reserved until that period in the school experience shortly before the pupil leaves the educational institution for his employment. This should not be construed to preclude activities in the schools for children of earlier ages, consisting of the development of manipulative skills, training in handicrafts, and other experiences of an exploratory nature.

Although specific vocational education does not seem suitable for the needs of children below the upper years of the secondary school, it is important to remember that one-fourth of the children who reach the fifth grade of the elementary school now drop out before entering high school, and only about one-half of those who reach the fifth grade ever get as far as the junior class or third year of the high school.⁶ Many of those who drop out of school before reaching the level at which vocational education seems appropriate will enter either the ranks of unskilled labour, for which it seems that specialized vocational education in the schools is not appropriate, or will become apprentices and will obtain their training on the job. Others will enter agriculture or homemaking occupations. In all these cases the school has the important

responsibility of continuing to serve the educational needs of these young people through offerings of part-time and evening classes.

A reform of the educational system is also needed that will hold more of these young people in school and will adjust the programme so that they may obtain the type of educational experience that will be most useful to them. Most of those who drop out before reaching the high school or in the early years of the high school are of an age for which vocational education in the schools would be suitable. Attendance laws in every State require the children to be in school until 14 years of age, and the more progressive States enforce attendance to age 16 or 17. Pupils of these ages should be so classified in the school that they may have appropriate opportunity for vocational training regardless of what their academic attainments may be.

The Smith-Hughes Act makes appropriations to assist in the vocational education of pupils in classes beginning at age 14. For some time to come it will be necessary in certain sections of the country and in certain individual cases to maintain opportunities for the training of young people down to this age. Specialized vocational education at an early age, however, should be discouraged.

Considerations of educational procedure and conditions of employment both indicate the desirability of postponing specialized vocational education, particularly for urban-type occupations, to a somewhat later age than 14. The trends of opportunities for employment in industry indicate clearly that vocational education should not take place until late in adolescence. Under general conditions it would seem pupils should not begin a specific type of vocational education until at least age 16, and for certain trades and industries the training should not begin until even later. This would imply that specific vocational education should not be offered until the latter part of the high school period.

In the full-time secondary schools the need is for a balanced programme which will include, in addition to the required

general education, an appropriate amount of training particularly designed to prepare for useful employment. The programme of the secondary school, as at present administered in most States and local communities, is frequently not properly balanced between general and vocational education.

The secondary school originally was designed to prepare for college entrance. In other words, it provided preliminary training for the vocations of scholarship and such learned professions as law, medicine, and theology. The subjects of the traditional programme of the secondary school, such as Latin and mathematics, were originally included in the curriculum because they were indispensable to advancement in the learned professions. After it became clearly evident that the great majority of the pupils in the rapidly expanding high school would have no vocational use for the subjects of the classical secondary school curriculum, those with vested interests of one sort or another began to defend these traditional subjects as essential to general education.

This conception of the secondary school curriculum as made up of subjects useful chiefly as preliminary preparation for the professions is no longer appropriate in this day when practically all children are expected to remain in school to the age of 16 or 18. Although many of the high school pupils may continue their education through the junior college level, a relatively small percentage can be expected to continue in preparation for the learned professions. It was indeed wise advice that led the Federal Government in 1917 to enact legislation providing Federal funds to stimulate vocational education in the secondary school period, as one way of meeting the needs of new groups of high school pupils who were not intending to prepare for a profession.

The purpose of the vocational courses, designed for those whose full-time schooling is to end within the secondary school period, should be to develop in each pupil: (1) Such habits and attitudes as will lead him to work cooperatively and happily with others in the general field of vocational activity which he

has chosen; (2) such acquaintance with the major vocational processes in that field as will make him an apt learner on the job, able to adjust himself to varying requirements; (3) a knowledge of the kind of training necessary for advancement in the field, and of where and how to obtain that training; and (4) enough limited specialized skill to provide him with the marketable ability necessary to obtain a beginning job. For these pupils the secondary school should provide a vocational education which will enable the pupil to get and hold a job in a vocational field broad enough to give reasonable assurance of opportunity for self-support and for vocational advancement to the limit of the pupil's potential ability. The secondary school should not seek to develop in boys and girls who have never had successful vocational experience under adult working conditions a higher degree of specialized vocational skill than the minimum necessary to get and to hold such jobs as may normally be open locally to beginners in their chosen field.

The second major level to which attention may be turned in the analysis of needs for vocational education is the post-high-school period, or the period of junior college and the technical institute. Full-time institutions of the junior college type have been established rapidly in the United States since the beginning of the twentieth century, but even yet a relatively small percentage of the total population has such facilities available under conditions which permit attendance of any students except those from the higher economic levels.

The needs of the economic order clearly point to the junior college period as the time when a large amount of vocational education should be given. Relatively few employers are willing to hire young people before they reach the age of 18, the customary age of high school graduation. Twenty years of age, corresponding to the end of the period of junior college attendance, is coming to be recognized as the desirable level for entering full-time employment for a large part of the population. The principle of giving the vocational preparation as close as possible to the time of entrance on the employment in which it will be used indicates the necessity for advancing

vocational education, especially in specific skills, to the junior college period for a considerable part of the population.

Even in communities in which the junior college has been established, the type of education most commonly offered in this institution falls short of providing suitable opportunities for vocational preparation. In fact, the typical junior college has a programme which merely imitates the first two years of the traditional 4-year college, and thus affords an educational foundation of value chiefly to those who expect to spend further years in preparation for a life of scholarship or for service in the learned professions. Only a few of the more progressive junior colleges have developed programmes intended mainly to increase the breadth of view of the students, rather than to prepare them for further collegiate or professional study.

There is obvious need for the stimulation of further opportunities for vocational preparation in the junior college as well as for general stimulation to increase the number of institutions of this type available throughout the country. Such development would parallel the influence exerted on high school offerings by the Smith-Hughes Act during the past 20 years. A few junior colleges have already demonstrated the value of terminal courses that prepare for entrance to the various occupations open to those with this level of training.

The specific types of vocational preparation which seem suitable to the junior college level include homemaking, distributive occupations, office occupations, the more highly skilled trades and industries, and the semiprofessional occupations. Technological training, such as junior engineering, offers important opportunities, and technical institutes set up on the junior college level can supply occupational training of many types. As in the case of the full-time high school it will be necessary to observe a proper balance among the various types of vocational education that are needed in the regions served by the junior college and the technical institute.

The Smith-Hughes Act definitely limits reimbursement to schools of less than college grade. For many years this provision was interpreted as denying reimbursement to junior colleges, but recently the practices of the Office of Education have been somewhat more lenient. There is still need, however, for a clarification of the statute so that there may be no doubt about the legality of assisting vocational education in junior colleges.

The third group for which vocational education is needed consists of young people from 14 or 17 years of age up to approximately 25, who have left the full-time school; most of these people are serving in the early years of their employment experience. In States having effective child labour and school attendance laws there are very few children employed in trades and industries under 16 or 17 years of age.

Many young people who leave school to take positions later find themselves unemployed, either because of a lack of sufficient training or because of a technological shift. Such persons are particularly in need of some form of training or retraining, and their economic position usually makes it impossible for them to return to the full-time school. In such cases there is an urgent need for some form of special or part-time vocational education.

In general the public school authorities have not been particularly alert to serve the needs of this part of the population, and the programme of public education as carried on by States and local communities tends to neglect those who are not enrolled in the full-time school. It should be noted, however, that service to this group is one of the major objectives of the present Federal programme of vocational education. The younger employed group has been given much attention by those interested in vocational education ever since the early years of the Federal programme. In fact, some leaders in the movement have believed that the Federal programme of vocational education should maintain services chiefly for the out-of-school group.

A fourth major group in the population for which vocational education is needed consists of the older adults who have been out of touch with the full-time school for a considerable period. The needs of workers in trades and industries are chiefly for vocational retraining. Technological changes cause rapid shifts in the demands for workmen and in the types of skill that are needed in economic production. Inasmuch as society, not the individual workman, is responsible for these shifts in technology, the provision of the necessary retraining is clearly a justifiable social expense.

The public school system now does relatively little to meet the needs for vocational education of those in the older adult group. The facilities needed for the conduct of the programme for this older adult group are similar to those needed for the younger out-of-school group, which have been discussed in a preceding section. In fact, the programmes for these two out-of-school groups might, in practice, be completely merged. The older adults possibly need certain types of rehabilitation services that differ somewhat from the needs of the younger group. In the case of both groups a large part of the vocational training can possibly be given on the job rather than in formal classroom instruction.

A specialized instance of opportunity for adult training is in connection with the work relief projects under Federal auspices. Vocational education is one of the outstanding needs of the relief group, and it is important for the rehabilitation of this element of the population that the employment provided be assigned with a view to the opportunities of improving the occupational competence of the individuals concerned.

The need for service to those who because of physical disabilities are prevented from entering productive employment has long been recognized. Federal subsidies for the stimulation of such training facilities in the States have been provided since 1921. Inasmuch as this problem is being treated in a separate monograph in this series,⁷ it is merely mentioned at this point

in order to complete the categories of those for whom vocational training is needed.

Needs for Vocational Education of Groups Classified according to Ability. When the idea of education for occupational proficiency first began to be introduced it was eagerly seized upon by many educators as the solution of a problem that was becoming increasingly troublesome. The high school was expanding its enrollments rapidly and there were coming into the secondary school with this enlarged group of pupils many young people whose abilities did not lie primarily along intellectual lines. To put such pupils through the academic curriculum that had long been established as the accepted background for the professions seemed both unwise and in most instances impossible. Industrial or vocational training thus early began to be looked upon as an alternative form of curriculum for young people with limited intellectual ability.

The advocates of vocational education became fearful lest this curriculum might become the dumping ground for the failures in the regular academic course. As a defensive measure they began to insist upon ability and intelligence as requirements for entrance in the vocational courses.

It is indeed true that there is considerable correlation between intellectual and manual ability; that is, pupils whose mentality is low and who cannot succeed in subjects like mathematics and foreign languages also tend to do poorly in shop work and other subjects requiring the development of fine muscular coordination. There are notable exceptions to this correlation in individual cases, but in the majority of cases abilities of various types seems to be somewhat related. The young person of inferior mental ability is not likely to become a skilled craftsman in any line of work, although some studies indicate a variation in the level of intelligence required for the different skilled occupations.

On the other side of the picture, it must be recognized that society, under conditions of sound economic adjustment, should

be able to employ the labour of all its members with the exception of those whose abilities are so low as to make them incapable of self-support.⁸ There are and there must be places in the economic productive system for people of all grades of ability above this suggested minimum. The obligation of the school, both to the boys and girls as individuals and to society as a whole, is to develop each to the highest limit of the abilities possessed. Such a principle would forbid the arbitrary elimination from school of any pupils whose abilities are above the lowest level required for effective self-support. Pupils whose abilities are below average may wisely be advised not to go into certain types of occupations, but the wholesale exclusion of young people from educational opportunities because of their limited abilities is undemocratic and socially unwise.

It is a responsibility of society to see that educational opportunities suitable to the abilities of each of its members are provided. If the schools are assigned this responsibility, then they must adjust their programme so as to provide education that is appropriate to the young people of varying levels of ability. If the schools refuse this responsibility then society must create other agencies to perform this necessary task.

Needs for Vocational Education of Groups Classified According to Residence. The chief problem of vocational education for groups classified on the basis of residence centers around the needs of the population in rural areas. It is a matter of common knowledge that schools in the rural regions of America are generally inferior to those in cities.⁹ The organization of the rural school system in most States is wasteful, with an insistence on the maintenance of small districts and school units of uneconomical size. Coupled with this factor, which would make for a higher cost in the rural districts than in cities for education of a given quality, is the fact that the ability to support education is on the average much less in the rural areas than in the cities.

The third factor in the situation is the fact that in rural areas the values of a good educational service are typically

much less appreciated than in the cities. The quality of leadership in education in most rural areas is generally recognized as below the quality of leadership in urban districts. In general, the schools in rural districts have short terms, poorly paid and poorly qualified teachers, and inferior plant and equipment for instructional purposes.

The deficiencies of the schools in rural districts in comparison with city schools, are particularly pronounced in general education, and it is inevitable that the same difficulties should carry over into the facilities for vocational education. In rural areas the important needs for vocational education are in the occupations of agriculture and homemaking. It must not be concluded, however, that these are the only occupations followed by those who obtain their education in rural districts.

The whole problem of suitable education for rural areas is complicated by the mobility of the population. The most significant internal migrations are those from the rural to the urban regions, and in turn from the urban to the communities. The net migration has, with the exception of two years during the recent depression, always been in favour of the cities.

This cityward trend has been in progress for a hundred years. It became more significant after 1900 and particularly after the World War. In the year 1920, 896,000 persons moved from the farms into the towns and cities, and 560,000 persons in the towns and cities moved to the farm. The cityward tide increased rapidly until 1922 when there were 2,252,000 who left the rural regions for the city, and 1,115,000 who migrated into the rural sections. The net increase in favour of the cities during that year was thus over 1,000,000. From 1923 to 1929 more than 2,000,000 per year left the rural communities for the urban centers, whereas the migrations from the cities to the rural regions averaged over 1,500,000 annually during that period. During 1930 the net migration from farms to urban areas totaled 212,000 and in 1931 only 20,000. But in 1932 the movement was reversed. The migration to the urban districts totaled 1,511,000; that to the farm totaled 1,777,000. Since

1932, however, the net migration has again been in favour of the city, but the net annual gain, approximately 300,000 at present, is considerably less than that of the previous decade.¹²

These figures indicate that a great tide of unskilled persons is continually pouring into the cities. Before the depression most of them were able to secure employment in the unskilled occupations of the cities, while some of them acquired training in the semiskilled and skilled trades after moving to the city.

The question of the kinds of vocational education that should be provided for these migrating elements of the population is difficult. Particularly in the case of young people residing in rural communities who will later move to the city, it is almost impossible to arrange a suitable plan for vocational education. In the first place, the individuals who are likely to make such a move cannot readily be identified. In the second place, training for an urban occupation, for example, the machinist's trade, cannot well be given in the rural environment where this trade is not practised. In the third place, the rural school units are so small that to provide the needed variety of occupational preparation would be excessively expensive. In the fourth place, there exists a deep-rooted prejudice against educating the boys and girls away from the farm, which would have to be overcome before any extensive programme of vocational education for children in rural areas could be maintained in fields other than agriculture and home economics.

In part the need for vocational preparation of young people in rural areas could be met by the establishment of regional centers where schools which include in their programmes training for various types of urban occupations could be maintained. The young people who do not have access to suitable schools in cities near their homes could go to these regional schools for education of the type they desire. Some States already have such a programme and the plan seems worthy of encouragement.¹³ In every case, of course, it will be necessary to determine the admission to a given type of training in terms of the

capabilities of the individual and in the light of the demand for workers in that field of employment.

The provision of suitable facilities for vocational preparation in rural areas is closely connected with the need for consolidation of schools and the creation of larger local school units. Suitably diversified opportunities can be maintained economically and on a sound basis only when the school unit is larger than that now typical of most rural areas. Exploratory courses, so essential to a well-considered choice of a vocation, are readily made available only in a reasonably large school. Guidance services offer much possibility of rendering assistance in solving the problems of vocational education for rural youth; such services might be maintained on a country-wide basis without necessitating further consolidation of schools.

It should be possible in rural areas to arrange some vocational training around the occupations of an urban type that are carried on in most small communities. In many rural areas it now seems necessary to import workers from cities for many non-agricultural occupations, because of a local dearth of well-trained garage mechanics, repairmen for electrical apparatus, lunchroom cooks and waitresses, and similar specialized occupations. The programme of vocational education in the rural areas should give attention to the non-agricultural occupations of the region as well as to agriculture and homemaking.

A special inquiry regarding the extent to which the present programme of vocational education in trades and industries serves the needs of rural and small urban areas was addressed to the State supervisors of vocational education in trades and industries. The great majority of those replying indicated that little or no service is provided such areas by the present programme in trades and industries. In response to a request for an estimate of the amount of additional funds and the number of additional teachers that would be required to extend the programme of vocational education in trades and industries into rural and small urban areas, 33 State supervisors reported estimates totalling approximately \$2,000,000 and 4,000

teachers. If the needs are of the same magnitude in the States for which no information was received, it may be estimated that the total national requirements, if suitable provisions are made for trade and industrial education in rural and small urban areas, would be in the neighbourhood of \$3,000,000 and 6,000 teachers.

Perhaps one of the best kinds of training for vocations that can be provided in rural areas for those who will migrate to the city and enter urban occupations is a sound elementary and general secondary education. In many rural areas these basic elements of preparation are not now given satisfactorily, and the first efforts should be in the direction of providing this type of education, which is a fundamental necessity for any vocation.

A part of the solution of the problem of providing training for these migrating elements of the population lies in the development of facilities for adult education. A great majority of those who migrate from a rural environment to a city, or from a city to a rural environment, must get the specific training to establish an adjustment to their new vocation after they have begun the employment in which they finally engage. The facilities for adult education should therefore be made available in increasing amounts for the benefit of those who have not had suitable opportunities for vocational education during their period of full-time schooling. The needs of this migrating group can be met effectively only with the close co-operation of State and Federal employment services.

The present programme of federally reimbursed vocational education has attempted to provide a type of training in trades and industries in smaller communities under the designation of "diversified occupations." The difficulties of this programme have been discussed in an earlier connection.

Types of Occupations for Which Vocational Education in the Schools Seems Appropriate

The assignment of responsibility to the schools for the provision of preparation for occupational effectiveness demands a careful

consideration of the types of vocations for which training may suitably be offered in the school. In the preceding section the question has been considered from the point of view of the individual learner and an attempt has been made to analyze and classify the population groupings for which vocational education in the schools seems desirable. The question may also be discussed in terms of the types of occupations for which vocational education in the schools seems defensible.

Principles for Selecting Occupations to be Taught in the School. It seems both possible and desirable to consider first some principles or criteria for determining what types of occupational preparation may with propriety be offered in the schools. Six such principles, applicable especially to pre-entry training, may be suggested.

1. The occupational preparation should have a considerable amount of intellectual content and should stress the development of knowledge and judgement. Training for an occupation which consists merely of the development of increased speed in some repetitive process is not suitable for inclusion in the school programme.

2. The training programme should be general enough to permit the preparation to be widely applicable to a variety of occupational situations. If the training is limited to the development of competence on a single piece of machinery, or to the learning of the skills necessary for a single highly specialized job in one industrial plant, it is not suitable for inclusion in the school programme.

3. The training should be for an occupation which the trainee will have an opportunity to enter soon after leaving the school. Preparation for a specialized occupation open only to those of mature years or of long experience in the industry is not suitable for inclusion in the school programme.

4. A programme of occupational training should allow sufficient time to produce in the learner a satisfactory degree of attainment, which will be recognized as such by the employer.

5. The training should be for an occupation the social desirability of which is beyond all question.

6. The number of young people to be trained should be large enough to permit arrangements for an economical form of instruction. There are literally thousands of occupations in which the total number of workers employed is very small. It will be obviously impossible for the schools, even in the largest population centers, to develop programmes that will afford specialized preparation for each of these occupations employing only small numbers of workers. In the interests of economy the programme in the schools must be limited to those occupations in which the number needing training is large enough to permit an economical grouping for instruction.

Another principle, sometimes suggested as a criterion, is to the effect that the schools should be concerned only with types of occupational preparation which require a considerable amount of time. According to this principle training for jobs that can be learned in a week or two, while one is actually engaged in the productive employment, would not be suitable for inclusion in the schools. An objection to this principle is that it is based on an aristocratic rather than a democratic concept of the services of the schools in occupational preparation. Admittedly there are many jobs requiring only a short time to learn for which training should not be offered in the schools. It would seem that the shortness of the training period should be considered as merely a danger signal, an indication of a need for further investigation before a programme is included in the schools, rather than as an absolute test of the suitability of the training as a part of the service of the schools.

Occupations for which Training may be Offered. With these principles in mind the various occupations can be reviewed to determine the extent to which the schools may appropriately offer opportunities for preparation in each. Occupations must necessarily be treated in broad categories in such a discussion. One of the urgent needs is for more information about each

of the occupations, classified into much smaller and more exact categories than are used in this discussion.

The preparation for agriculture as an occupation seems to meet the test of all the criteria that have been set up in the preceeding section. As a general rule an occupation becomes more and more complex and difficult as there is more and more scientific information available about the processes concerned. The agricultural experiment stations of the land-grant colleges have developed, since the passage of the Hatch Act in 1887, a vast body of scientific data in the field of technical agriculture and agricultural economics.

The complexity of agriculture at present is shown by the common practices which should be followed by the average practical farmer of the modern type. Some of these practices are as follows: Using sound principles in managing farm enterprises; keeping cost accounts; adjusting the quantity and quality of production to consumptive demands for foods and for industrial raw materials; conserving the fertility of the soil; using power machinery; keeping improved breeds of livestock and growing improved varieties of crops; controlling insect pests and diseases of plants and animals; providing modern conveniences for the home and beautification of the farmstead; marketing and buying cooperatively; maintaining membership and leadership in farm organizations; complying with and assisting in the administration of Federal farm programmes; having knowledge of the availability of outside counsel and assistance from country, State, and Federal agencies; and assisting in shaping agricultural policies for the local community, for the State, and for the Nation.

Agricultural education of the right kind benefits farmers, who are both managers and technicians, (1) by enabling them to produce a higher quality of product at a lower cost both of labour and of natural resources; (2) by increasing their net income and thus enabling them to maintain a higher standard of living and to be more secure economically; (3) by making it possible to get more satisfaction from their work; (4) by making

it easier for farm boys to get started as farm operators; and (5) by removing the stigma which comes to any group which does its work in a bungling manner.

Agricultural education is of value to society at large because in the complex economic structure all groups benefit or suffer according to whether any one of them does its work well or does it poorly. This applies especially to occupations like agriculture which are basic to so many others and which employ many people. Agricultural education of the right kind makes it possible for the consumer to enjoy a higher quality of product at a reasonable cost; it conserves human and natural resources; it insures adequate production for national needs both in times of peace and of war; and it is a large factor in insuring national prosperity.

Many of the problems which aggravate the ills of the agricultural industry can be alleviated or cured by education. Failure to use the land intelligently, to reduce tenantry, to adjust production to market demands, to increase labour incomes, and to improve health and housing, can be corrected, to some extent at least, by the proper kind of education in agriculture and homemaking.

The conclusion is clear that preparation for the vocation of agriculture is entirely suitable as a part of the school programme.

Only in relatively recent times has there come an adequate realization of the fact that homemaking is a highly skilled occupation. The recent movement in the direction of broadening the materials covered in this subject¹⁶ has added greatly to the possible range of intellectual content that may be treated in home economics. The preparation for this occupational field has the advantage of being directly applicable to the daily life of the learner during the training period as well as afterward. There is no question but that a great majority of the girls who take this subject will have the opportunity to employ their vocational training. Recently there has been manifested a

considerable interest in the provision of homemaking classes for boys. This movement seems justified on the basis that homemaking is not a task for women alone but one in which the two sexes must cooperate.

With the broadened content of homemaking education, there is perhaps some justification for considering it a part of general rather than of vocational education. Certainly it is general as far as the extent of the need for it is concerned. Furthermore, much of the newer content partakes of the nature of the social studies, always considered a part of general education, rather than the development of specific vocational information and skills. But whether homemaking is classified as general or vocational education is a matter of little consequence, as long as suitable opportunities are offered for young people to obtain this type of education.

It seems clear that if homemaking education is vocational, it differs from the other types very markedly in that it cannot be overproduced in terms of the number of individuals given such training. There is no danger of turning out too many people well equipped with all the information and skills necessary for success in homemaking activities.

One phase of the programme of home economics education concerns the preparation of women for paid employment related to homemaking. The preparation needed for many of these employments, such as domestic service, is so similar to that of homemaking itself that the inclusion of such training seems to be entirely in keeping with the character of the vocational programme. This phase of the work in the past, however, has received relatively little attention, and opportunities for such preparation are unattractive to girls because of real or fancied social stigmas. Possibly if the programme were arranged to allow girls of the suitable age levels to prepare for special jobs, such as cook, second maid, or governess, it might have a greater appeal.

It is perhaps unfortunate that it is necessary to treat under a single classification all the variety of occupations generally classified as trades and industries. They differ so much from each other that generalizations are difficult. The discussion that follows is developed chiefly from the point of view of the needs of the worker in the factory-type of industry. Other types of trade and industrial vocations, such as the construction crafts, transportations, public utilities, and the many service occupations, are also important, but the discussion of the needs of the workers in factory-type occupations will serve to indicate in a broad way the general requirements in the whole field of trades and industries.

Modern industry is highly specialized. Though the degree of specialization may vary in different industries and individual plants in accordance with the size of the establishment, there is a minute division of labour in every plant. The larger the plant, the more specialized the division becomes. Work assignments are broken up into smaller and smaller units, and the majority of workmen in industry today tend only one machine or perform only a few repetitive operations. Thus the training and skill required for factory workers vary greatly. Modern industry employs a large number of non-skilled workers who perform tasks that require no particular training, an increasingly large number of semiskilled workers who are employed on repetitive operations, and finally, a large but slightly decreasing number of skilled workers who are thoroughly competent to do custom work and to construct and maintain in repair the highly complicated machines that are operated by the semiskilled or unskilled workmen.

Skilled mechanics are expected to be well versed in the use of machines and tools that are found in a shop and they must also be able to use considerable judgement in their work. Semiskilled workers are usually responsible for only one step in the production of an article. After they have once acquired the necessary dexterity and speed, they need little judgement. Unskilled workers or common labourers do not require any

previous specialized training because they can be taught their tasks in a few hours.

The nature of the training for trades and industries should be gauged by the type of enterprise the individual expects to enter. Vocational schools must recognize that training for building and other trades, including repair and service work, will have to be broader than that required by skilled factory workers, because large numbers of the journeymen in many trades may expect to go in business for themselves some day. For this reason such trainees will require some preparation in the fundamentals of business training in addition to the related subject matter that is taught in the trade school.¹¹ In contrast, individuals preparing for factory employment will not require business courses since very few workers can expect to set up a factory of their own and most of them will have to work for somebody else. A broad background education that will acquaint a student, after he has decided what occupation he intends to follow, with the machines, materials, tools, and the way they are used in the industry that he intends to enter is required for skilled as well as semiskilled workers. Equally necessary is a broad and general training in subjects that are directly related to the practical work done in a school shop or in a plant, so that the student may become thoroughly familiar with the principles and underlying reasons for the uses made of machines, materials, and tools in the trade or occupation for which he is preparing.

For all these groups general instruction in safety devices, in accident prevention, in health and hygiene, and in civics, English, and other subjects that prepare the pupil for effective community life, is both necessary and desirable. Equally important is instruction from an informational standpoint in social legislation, with special reference to workmen's compensation laws, safety laws, unemployment compensation statutes, the use of public employment services, and similar topics.

Certain phases of the preparation for trade and industrial pursuits meet all the tests of the principles previously suggested

for determining the vocational subjects that might well be included in the school system, such as intellectual content, applicability to wide variety of occupations, immediate availability of employment, suitable level of attainment, social desirability, and economy of instruction. Almost all leaders who have studied this problem from the educational point of view agree that training for these vocations is suitable for inclusion in the school programme, as long as it is not too narrow and specific.

The conclusion seems justified that there are many elements of the occupational training needed for trades and industries which can very appropriately be given in the schools. The training in the full-time schools should be limited to the phases that meet the criteria previously set forth.

Although not included as a part of the Federal programme of vocational education, training for the office occupations, such as typewriting, stenography, and bookkeeping, has had a long history in the public schools. Data presented previously¹⁸ show that clerical and kindred occupations are increasing more rapidly than any other group of occupations in the country. The public schools are making extensive provision for education for office occupations, and many private schools for training in these subjects flourish. In a number of centers where such work is given in the public schools the quality of the programme is not so high as desirable.

There is considerable evidence that the number of persons given training in office occupations is far in excess of the present demand for such services. Accurate statistics, however, on the relation of the number trained in this field to the demands for new workers are available in only a few communities. It must be recognized that subjects such as typing and bookkeeping may be taken by a great many pupils for nonvocational purposes, or at least without thought of entering immediately on employment in which such knowledge and skills would be used. Skill in typing, for example, is today of perhaps as much general social utility as skill in handwriting:

such values should, of course, not be confused with training for the occupations for which the courses are advertised and for which many pupils imagine they are being prepared. The time is undoubtedly not far distant when ability to use a type-writer skillfully will be as much or more a test of literacy as ability to write a good hand.

Thus the limited data that are available on the relationship between the number in training for office occupations and the demand for such workers may be entirely misleading. This is an occupation in which the turnover may be expected to be rather high, and for that reason the ratio of the number of persons in training to the number of jobs available may justifiably be greater than in occupations in which the turnover is relatively low.

Training for office occupations meets acceptably every test of suitability for inclusion in the school programme. Under modern conditions much of the training for office occupations should be given at the junior college level.

Only in relatively recent times has the introduction of specific training for distributive occupations been attempted in the schools. Certain phases of training for distributive occupations meet fully the criteria suggested earlier as a test for the inclusion of vocational training in the public schools.¹⁹ There may be some doubt about the social desirability of preparing young people to become clever salesmen only, but this is by no means the entire content of vocational education for distributive occupations. The knowledge of merchandise, including ability to distinguish qualities, can certainly be defended as desirable equipment for all who are engaged in selling goods. The recently increasing development of co-operatives, of both the consumer and the producer type, creates a demand for widespread knowledge of methods in distributive occupations.

Considerable caution needs to be exercised in developing opportunities for vocational education in the distributive

occupations to prevent the exploitation of those who are prepared and to prevent overdevelopment of the supply of such workers. This caution is particularly pertinent because strong organizations of workers have not yet developed in this field and there is consequently no recognized avenue of effective protest against unsound conditions. In some centers where co-operative types of education in the distributive occupations have been developed there has been an unblushing exploitation of the pupils, who have been put to work in mercantile firms at ridiculously low wages or even for no wages at all. The school needs to safeguard the programme of vocational education in the distributive occupations carefully in order that such abuses may not occur.

It may be concluded that, if properly safeguarded, training for distributive occupations has a legitimate place in the school system. The degree to which complete training for such a vocation can be provided through the schools is probably much less than in the case of occupations such as agriculture and home economics.

Another field of training in which great interest has recently been displayed is preparation for public service occupations. There are a considerable number of very diverse occupations included in this category. It will be recognized, for example, that stenographers working in public offices may and commonly do have their training provided through the public schools. One of the most important public service occupations is school teaching and preparation for this service has for almost a hundred years been provided in the United States in institutions under public control. For other types of public services, however, such as police and fire protection, sanitary inspection, et cetera, the public schools have hardly begun to offer training facilities.

Training for public service occupations such as police and fire protection and sanitary inspection must be regarded as being at present in an experimental stage so far as the school system is concerned. It would undoubtedly be wise to foster

experimentation with these new types of training in order to determine the extent to which the school system may possibly be called upon to provide the training needed for competent public service. Opportunity to enter these public service occupations usually does not come until the individual is more mature than the average high school graduate. For that reason the training should be given at the junior college level or in classes for adults.

Content Needed in Vocational Education

The question of the type of education that best prepares for a vocation needs extensive consideration. It is unfortunate that there have been few if any research studies to answer this important question. Present programmes were originally set up on the basis of authoritative opinion, and the content has been modified from time to time as experience seemed to indicate. A broad overview of the programme of vocational education as now operated under Federal grants-in-aid leads to the conclusion that the content for homemaking and agriculture has been worked out much more satisfactorily than that for trades and industries.

It must be recognized that some excellent work has been done through the Federal Board for Vocational Education and the Office of Education in making job analyses in a number of occupations as a basis for the content of a training programme for vocations. Despite such efforts, there seems to be a considerable amount of dissatisfaction with the present type of content in vocational education for trades and industries. The principal issue in this field seems to center around the question of whether the training given in high schools should be narrow and specifically directed toward preparation for a particular job, or whether it should be broad and general and of a type calculated to prepare for a wide variety of occupational situations. The discussion of the content needed in vocational education will be limited to the field of trades and industries, in which the problem appears at present in its most acute form.

Type of Training. The weight of the evidence collected in the present investigation leads to the conclusion that preparation of a narrow and specific type should not be fostered under a programme of vocational education in the public high schools. Modern conditions place a great premium on versatility and adaptability; to encourage in the schools a type of preparation suitable only for narrowly defined jobs is counter to the best interests not only of the pupils but of the economic order. The needs, in so far as the school is concerned, seem to be clearly for the cultivation of a broad range of general skills and abilities that may be of value in a whole related family of occupations. For example, instead of training a boy in the schools to be a highly skilled tinsmith, he might more profitably be given general preparation for the metal-working trades; instead of training for a high degree of skill in cabinetmaking, he might better be given instruction that would be broadly applicable to all wood-working trades.

Development of such general characteristics as dependability, thoroughness, exactness of thinking, critical attitudes, effectiveness in use of English, and accuracy in arithmetic are examples of the tasks that are suitable for the schools. The narrow, specific type of training can well be left to the period after entry on employment. In any event, this part of the training will be given on the job, regardless of the extent to which the schools attempt it.

The full-time high school should not attempt to turn out full-fledged craftsmen completely ready to step into an occupational situation. Instead, its efforts should be centered on the provision of training that will enable the young worker to develop skill on the job more quickly than he otherwise would, that will enable him to engage in his occupation with satisfaction, and that will permit him to shift with a minimum of difficulty to some new occupation if and when his job vanishes in the course of technological development. Flexibility of mind and a wide range of personal interests are basic to a successful working life in any vocation. For this reason a well-conceived

programme of general education should be considered as the foundation of any plan for vocational preparation.

A sound programme of preparation for an occupation consists of a chain of three links: Guidance, training, and placement. The success of the entire programme is dependent on the strength of each of these three links. If one of them is lacking or neglected the whole programme is likely to be of little avail.

Guidance. The guidance that is needed should be of an advisory, not of a deterministic, sort. It must be confessed that in the present state of development, educators lack much of the essential information needed for a sound guidance programme. The tools of individual diagnosis that are used are, in general, rather unreliable. There is a lack of any well-developed body of knowledge regarding the relationship between personal characteristics and success in the various types of occupations. Much work remains to be done in the improvement of counselling procedures. Despite these shortcomings, there is enough information and technique available to assist young men and women greatly in making the choice of their life work on a thoughtful, considered basis, rather than on the basis of some trivial, inconsequential circumstance.

Every young person should have opportunity for guidance prior to choice of a vocation. The guidance programme must be coupled with extensive provisions for exploratory courses. After a choice of a vocation is made and the training programme is begun there should be a more or less continual check-up to determine the extent to which the occupational choice may have been wise.

The need for suitable provisions for vocational guidance cannot be overstressed. Guidance is at present one of the weakest parts of the entire educational system. It should be clear that to provide training for occupations without suitable guidance is apt to be both wasteful and mischievous in its effect. Perhaps it would be wise to refrain from making any

more appropriations for vocational training until suitable provisions are made for guidance services.

Phases of Training. The second element of the programme of occupational preparation—training—has in the past occupied the center of attention. It is, of course, important that instruction be soundly organized and given by competent teachers. Three phases of the training that is needed may be emphasized.

The first is the informational content, the background of intellectual materials which are essential to occupational efficiency. The amount of the content of this type needed in various fields of occupational preparation varies widely, but, as previously pointed out,²⁰ every programme of occupational training that is worthy of inclusion in the school should have a certain amount of content of this type. The second phase of the training programme is the development of the manipulative skills that are associated with the family of occupations for which training is being given. The third phase is an orientation in the social and economic situation into which the young person will plunge after his training is completed.

The first two of these phases of vocational education have usually been recognized and the second has been carried on with great thoroughness. The third phase, the training for the orientation in the social and economic situation, has been almost totally neglected. It should be clear that to thrust the young worker into industry without knowledge of such elementary facts as the methods of protecting himself from exploitation by low-grade employers is even more fatal than to send him out lacking adequate instruction regarding the method of protecting himself from bodily injuries to which workers in the vocation may be particularly susceptible. Knowledge of the legislation pertaining to such matters as collective bargaining, hours and wages, workmen's compensation, and similar matters is as much a legitimate part of the young worker's equipment as is the knowledge of how to care for his kit of tools.

The elements of the training that look toward the orientation of the trainee in methods of adjusting to the social and

economic problems of workers should be considered a vital part of his vocational education. The purpose of this part of the training should be not only that of equipping the young worker to protect his own interests, but also that of enabling him to co-operate effectively with others in order to further the highest interests of the entire social group.

Recognition must also be given to the fact that a sound programme of general education at both the elementary and the secondary school levels has real value as vocational preparation. The value arises in part because the individual engaged in an occupation needs the general education for many phases of his daily activity. For example, reading, writing, and arithmetic are fundamental necessities in all occupations. Economics is a subject of general education; yet a workman in any vocation must fit into the economic system and needs an understanding of basic principles of economics in order to achieve success and satisfaction in his occupation.

Furthermore, a sound general education is necessary as a foundation upon which a satisfactory vocational education may be built. For example, an electrician or a farmer requires thorough training in the sciences related to his vocation. Perhaps such subjects for a pupil who plans to enter the occupation should not be considered as general education but rather as vocational training.

Placement Services. The third link of the chain of vocational preparation is placement. It should be clear that to guide a pupil carefully into a wise choice of an occupation and to give him sound training for that vocation is not sufficient. Contacts must be furnished with opportunities for the exercise of his training. After the initial placement, there should be sufficient follow-up to determine the success which the young worker is meeting in his employment. In a limited percentage of cases it will be necessary to readjust by transfer to a different occupational setting.

The placement and follow-up services are important from three different points of view. In the first place, there is a

distinct service to the trainee, who usually must rely on some outside agency to bring him into contact with an opportunity for employment. In the second place, there is the service to the employer, who is looking for talent and who is greatly served by having the availability of suitably qualified persons called to his attention. In the third place, the training agency itself is benefitted, for by following up its trainees in the employment situation the school is able to evaluate the instruction it has given and to make modifications looking toward its improvement.

The question of the agency that should undertake the placement service may appropriately be raised. Some of the city school systems undertake to render this service, but for the most part placement services have been organized outside the school systems. The United States Employment Services and cooperating State employment services are the chief development under public auspices and there are widespread agencies under private control that undertake placement and charge a fee for this service.

The intimate connection that exists between guidance, training, and placement has led some educators to conclude that at least the initial placement and the early follow-up in employment should be undertaken by the school, in accordance with the policies and procedures worked out in co-operation with the established placement services for the more mature workers. After the trainee has become well adjusted in his initial employment, it would be fitting for other agencies to undertake the later requirements of a placement service programme for him. Others point out that this responsibility may be discharged by the schools through a co-operative relationship with other placement agencies.

If the placement service is assigned to some other agency, the schools may be denied the valuable check on their training that is afforded by the follow-up procedures. It may be pointed out also that the school may maintain full and complete records concerning those who have been its pupils, and it may

thus give information on many aspects of personality and competence that would not be available to other agencies without expensive duplication of records.

One other consideration also leads to the conclusion that the schools should have a responsibility for placement service. The needs for these services are all pervasive, and the public school system is one of the few organized agencies now having sufficient pervasiveness to reach the entire population. It would be extremely expensive to set up duplicate agencies under Federal auspices or to require local communities to set up dual agencies for these services. It is true that the United States Employment Service operates in most of the urban centers, and some of the responsibility for placement can be borne by this agency, but present plans for the development of the Federal and State employment services do not seem to indicate the possibility of a completely pervasive service, particularly in rural areas.

It would seem that there is no necessary duplication between placement services in the public schools and in the other agencies, such as the United States Employment Service, particularly if the schools limit their activities to the initial placement and follow-up in the early employment experience. The task of providing placement services is large and at present inadequately performed in most communities; expansion of the present placement activities both of the schools and of the public employment agencies is urgently needed. In every community where the United States Employment Service is in operation, the placement services in the schools should have a close functional relationship to this agency. In some cities the best plan might be to have a branch of the Employment Service located in the schools, possibly with overlapping staffs. A co-operative arrangement should be fully worked out for an exchange of information and services between the schools and all other public agencies concerned with placement activities.

The Preparation of Teachers

The satisfactory operation of a programme of training for

occupations is conditioned on the availability of a properly qualified teaching and administrative staff. Elsewhere in this study extensive discussion has been presented regarding the preparation of teachers for vocational subjects.

This whole question of the proper programme for preparing teachers for vocational subjects is very complex. In general the people who are most competent to deal with this problem are those on the staffs of institutions of higher education. It seems appropriate to leave the major responsibility for the development of programmes for the training of teachers of vocational subjects to the authorities in institutions of higher education which have undertaken such services.

Cost of a Defensible Programme of Vocational Education

The preceding sections have outlined the general nature of a satisfactory programme of vocational training for the United States. An estimate of the cost of such a programme would be useful, if it could be made on an accurate basis. Unfortunately the basic data needed for a calculation of such an estimate are not now available. The following information would provide a method of calculating the total cost, if the data were available: (1) The number of persons needed annually as entrants into each of the various classifiable types of occupations, including homemaking; (2) the length of the pre-entry training needed for each of these types of occupations; (3) the cost of the training for each type of occupation per unit of time. From these facts the total annual cost of the programme of vocational preparation could be ascertained.

It is important in making this calculation to insist that the grand total of entrants into classifiable occupations each year (item one) must equal the total number of young people coming of employable status. Although this goal may not be possible of attainment in the present state of adjustment of the economic order, the only alternative is the acceptance of a permanent class of unemployed.

Although it is not possible from data now available to present an accurate calculation of the total funds needed for a sound programme of vocational preparation, it may be estimated from data given elsewhere in this report that the amount now provided is far from sufficient. The present programmes of vocational education in the public schools reach only a small fraction of the young people that should be given the opportunity for this type of preparation. At the adult level only a beginning has been made in supplying the needs. Unquestionably it will be necessary to make large increases in the support of vocational education before suitable provisions can be made available to all the citizens of the country.

NOTES AND REFERENCES

1. Production is here used in the very broad sense of making a contribution of goods or services to the satisfaction of human wants.
2. No. 6570-C of June 27, 1934.
3. 50 Stat. L. 664-5 (1937).
4. The reader should remember that the general term "vocational education" does not here refer particularly to the federally aided programme, but rather to the broad function of preparing young people for occupational effectiveness.
5. National Resources Committee, *Technological Trends and National Policy, Including the Social Implications of New Inventions* (Washington: U.S. Government Printing Office, 1937), p. viii.
6. Based on grade distribution in 1933-34. Biennial Survey of Education: 1932-1934, Ch. II, pp. 56-7.
7. Lloyd E. Blauch, *Vocational Rehabilitation of the Physically Disabled*.
8. "Incapable of self-support" may be considered as including all those whose productive efforts are insufficient to earn a defensible wage plus the cost of the supervision of their work. No effort is here made to estimate the number of such people in the total population.
9. For a discussion of this problem see Payson Smith, Frank W. Wright, and associates, *Education in the Forty-eight States. The Advisory Committee on Education, Staff Study No. 1* (Washington: U.S. Government Printing Office, 1938).

10. U.S. Department of Agriculture, Bureau of Agricultural Economics News Release, June 24, 1937, Farm Population Estimates, January 1, 1937 (mimeographed), p. 9.
11. Proceeding of the 54th Annual Convention, National Association of Master Plumbers of the U.S. Inc., June 23-25, 1936, Buffalo, New York (Washington: National Association of Master Plumbers, 1936), pp. 131-32.

The Place of the Federal Government in Vocational Education

If a programme of vocational education is to be operated under public control and with public support, it is necessary to decide which of the various levels of the government, Federal, State, and local, are to participate in the programme and the extent of the participation of each. The division of the support between the three levels of government demands a careful analysis in terms of the types of social groupings that are affected. To the extent that vocational education is a matter of purely local concern, the support may quite properly be expected to come chiefly or entirely from local government. If the concern for vocational education is limited by State boundaries, then no unit larger than the State need be called on for support. If an adequate opportunity for vocational education is a matter of national concern, quite properly the Federal Government may be expected to participate in its support.

The answer to the problem of Federal interest in vocational education seems perfectly clear. For 20 years the Federal Government has supplied funds for a programme of vocational education. Congress was persuaded to embark on this

programme because of convincing reasons demonstrating the national interests that would be served by such grants. Nothing that has happened in the 20 years since the Smith-Hughes Act was passed has changed the validity of this reasoning. There have been criticisms against the manner in which the programme has been conducted, but nothing that has seriously challenged the basic fact of the need for Federal interest in and grants-in-aid for vocational education.

In other studies in this series the reasons for Federal aid to general education are clearly developed.¹ All of these arguments apply with full force to the programme of vocational education, and it is not necessary to repeat them here. All that needs to be said is that the necessity for interest in and appropriations for vocational education by the Federal Government has been amply demonstrated.

There remains, however, the important question with respect to the major purposes that should influence the participation of the Federal Government in the programme of vocational education. Grants of funds may be provided for one or more of three possible purposes: (1) Stimulation of States and local communities in providing vocational education; (2) equalization of State and local burdens of supplying such services; and (3) direct support of the programme. The desirability of Federal grants-in-aid for each of these purposes should have careful consideration.

Needs for Stimulation

The philosophy underlying the use of funds for the purpose of stimulation implies either unwillingness, neglect, or unawareness on the part of the agencies which should normally be expected to support and operate the educational programme. If, for example, the State and local educational authorities are unwilling to include a needed type of education in their regular programme, or if they have overlooked the provision of educational services that are of importance from a national point of

view, one remedy for the situation is the stimulation of these services by grants of funds from Federal sources.

The result of stimulation seems to be that the programme develops much more rapidly at the beginning than it otherwise would. Stimulation does not result, however, in an equal spread of the programme throughout an area or nation, unless the funds provided are relatively large. Particularly if matching provisions are attached, as is usually the case in grants for purposes of stimulation, those States and communities with greater financial ability are able to develop much larger and better programmes than those less able financially.

Stimulation as a purpose of Federal grants-in-aid implies a temporary situation. It would seem that a proper policy for the use of Federal funds for this purpose would be to provide increasing amounts for a certain period, perhaps 5 or 10 years, and then gradually to taper off the amount as the States and local communities begin to follow the example in the programme stimulated. Certainly, if funds are to be used for stimulating purposes, they should not be continued in a given local system for an indefinite period.

Stimulation from Federal sources, as provided in the original Smith-Hughes grants, seems largely to have run its course, particularly insofar as the services of the full-time secondary schools are concerned in agriculture, home economics, and trades and industries. Continuation of this type of aid must be justified, if at all, on some basis other than stimulation.

There is need, however, of stimulation from Federal sources in certain other areas of vocational education. The junior college, a new type of educational institution, is as much in need of a correction of its programme as was the secondary school two decades ago. Education for adult groups has been meagrely developed in local school systems and stimulation of this important function by the Federal Government seems entirely justified. Guidance and placement services have been inadequately supplied by most local schools and there could

well be a period during which the Federal Government might seek to stimulate better and more extensive services of these types. In many States teachers for vocational education and related services have not been supplied in numbers large enough to meet the demands for expanding programmes, and continued use of Federal funds for stimulation in the area of teacher preparation might be justified.

Needs for Equalization

Equalization of State and local burdens of supplying vocational services is a second major purpose for which Federal funds might be provided. Research during the last 20 years has shown clearly the ever-increasing variation in the ability of the States to support education. Other studies for the Advisory Committee on Education indicate that on the basis of average effort to raise funds for school purposes three of the States could provide more than \$125 annually for each child 5 to 17 years of age, whereas three other States could not provide as much as \$14 per child.

Research has clearly demonstrated that there is little relationship between the need for education in a given State and the ability of that State to finance public education. The increasing mobility of population, the concentration of wealth at a few centers in the Nation, the sparseness of population in some sections, the depletion of natural resources, and the indebtedness of many local governments are some of the factors that contribute to the differences in the ability of the States to support educational enterprises.

Although education has traditionally been considered a State responsibility, the development of technology and of interstate commerce and the improvement of communication and transportation facilities have tended to break down the significance of State lines, just as the significance of township and country lines was broken down in the latter part of the nineteenth century. These circumstances and others have given rise to the judgement that public education is no longer solely

a State enterprise and a State responsibility but is of peculiar significance to the welfare of the Nation as a whole.

Education should be so administered and so supported in all of the States that a justifiable minimum programme of education will be available to all who need it, regardless of the taxable wealth of a given State or of a given unit within a State. Federal grants for education should therefore be so distributed as to take account of the need for education, on the one hand, and the ability of the State and local community to support it, on the other.

In those States in which an undue effort would have to be exerted to provide a justifiable minimum programme, it seems appropriate to use Federal funds to assist in maintaining at least a suitable minimum of educational facilities. There should be no attempt to limit State and local initiative, and every encouragement should be lent to all State and local units to increase the minimum educational programme so as to provide a greater opportunity and an enriched programme. Progress must be made not by levelling down the superior systems to the general average, but by raising the inferior. Unless steps be taken soon in the United States to level up the lower areas in which educational opportunities are markedly inferior, these must drop relatively lower and lower, greatly to the peril of the country.

Grants-in-aid that are distributed for the purpose of stimulation are not only a stimulus for effort but also a form of reward for effort. Reward for effort is in general incompatible with the purposes of equalization inasmuch as the rewards go to local school units that in general are most able to support a programme from their own funds. Continued grants on the basis of stimulation tend therefore to defeat the purpose of equalization. As has already been pointed out, this effect is now observable in the Federal programme of grants for vocational education. In the long run equalization is a more important objective than stimulation, although stimulation may serve a useful function for a short time. This

is an added reason for the conclusion drawn earlier to the effect that the programme for grants-in-aid for the purpose of stimulation should be temporary.

The equalization of either educational opportunity or burden of support seems not to be a problem peculiarly related to vocational education. It is rather one of those general problems that should be considered in relation to the total educational programme. Special action to equalize the burden of vocational education among the States might result in a badly distorted total educational programme in those States which find difficulty in obtaining funds for the support of their other educational activities. Such States would probably maintain very good facilities for vocational education and a relatively inferior level of general education. Regardless of one's enthusiasm for vocational education, it could scarcely be maintained that such an unbalanced programme would be sound, even for the purposes of training for occupational efficiency.

It may therefore be concluded that planning limited to vocational education should not be concerned primarily with setting up of an arrangement to achieve equalization. Such an objective should be set up only when it is possible to take into account the full and complete programme of educational activities.

Although equalization of educational opportunities or burden of support does not seem to be desirable as the primary objective in the granting of Federal funds for vocational education, the distribution of funds could be made by a formula that would avoid the introduction of elements tending to increase the present inequalities among the States. In other words, equalization may relate merely to the method of distributing funds for vocational education, rather than to a primary objective of the programme.

Needs for Outright Support

Outright support of an educational programme is the longest step that can be taken as an expression of interest on

the part of the Federal Government. The evidence accumulated in this study indicates that the present Federal programme of vocational education is actually operated on the basis of support rather than for the objectives of stimulation and equalization.

The best evidence on this point is the fact that the Federal funds have not been devoted exclusively or even primarily to programmes in new centers where there has in the past been inadequate recognition of the need for vocational education. Instead, relatively large amounts of funds have year after year continued to go into the same communities, where the need for vocational education has had ample opportunity for thorough demonstration.

The title of the Smith-Hughes Act, which describes it as "an Act to provide for the promotion of vocational education," indicates that the original purpose was probably stimulation rather than support. Numerous facts may be pointed out, however, which indicate that the objective of stimulation has gradually changed into an objective of support in the actual operation of the Federal programme. The proportion of State and local funds used in the programme has not increased since the early years of its development. Year after year certain local communities have received the benefits of these Federal funds for maintaining a programme that has not greatly changed since it was first introduced.

Communities now commonly take the attitude that they will operate a programme of vocational education in accordance with the Federal prescription only when and if Federal funds are available to assist in financing it. Such an attitude indicates that the use of Federal funds serves merely to support a programme, not to stimulate it, for obviously the stimulating function has not reached its objective until a community is sufficiently convinced of the desirability of the programme to continue it without assistance, if necessary. The fact may as well be frankly recognized that the Federal Government is now partially supporting a programme of vocational education,

and is doing little to stimulate or promote further development except as additional funds are made available in Congressional appropriations.

The desire to support a programme of vocational education may arise from two different motives on the part of the Federal Government. The first may be a realization of an essentially national concern with or interest in the training involved in the programme, and the consequent assumption of a responsibility that truly belongs to the Federal Government. The second may be a desire to buy a share in the control of the programme in order that it may be operated according to the ideas and plans of the Federal Government. The latter seems to be the theory that underlies the present administration of the programme of vocational education; this principle was, in fact, frankly recognized in the 1917 edition of the Statement of Policies published by the Federal Board for Vocational Education. Authority for such a statement, however, seems not to be explicitly covered in the Smith-Hughes Act itself.

It has already been pointed out that the purposes of stimulation and equalization tend to be incompatible. Quite the opposite is true with reference to the purposes of equalization and support, for these two objectives may readily be served by the same programme of grants-in-aid, if matching is not required.

Amount of the Federal Contribution to Vocational Education

The amount of the Federal contribution that should be provided for vocational education may be discussed on the assumption that there will continue to be grants of funds earmarked for this programme. If the suggestion made earlier for the abandonment of special grants for this phase of education is followed, there is of course no need for a decision as to the amount of Federal support for vocational education. In the event this suggestion is not followed, it is necessary to consider the policies regarding future grants by the Federal Government for the aid of vocational education.

It has already been pointed out that during the past 20 years the trend of Federal subsidies to vocational education has been distinctly in the direction of the support of a programme. Stimulation has been to a considerable degree lost sight of, and the objective has tended in the direction of simple support of the programme. This tendency seems almost inevitable.

Consideration of the importance of vocational education for national needs leads inescapably to the conclusion that the Federal Government should ultimately be responsible for the support of a large part of the programme. This clearly is the goal toward which the developments have been tending for the past two decades, and it may as well be recognized now as later that this is the direction of ultimate development. The States and particularly the local communities which have the greatest needs for vocational education are those that are least able to bear the burden of supplying it. A minimum defensible programme of vocational education can be financed in a large number of the local centers only through relatively large contributions by the Federal Government, amounting in many cases to almost the entire cost of this service.

Only by the introduction of a much larger programme of Federal support can equalization be accomplished in the States and local communities. As has been previously pointed out, a programme of grants-in-aid for the purpose of stimulation, if long continued, is almost certain to run counter to the objective of equalization; the purposes of equalization and support on the other hand, are entirely compatible. To be effective for the purposes of equalization, the degree of support by the Federal Government must be fairly large, owing to the wide differences in ability among States and local communities, and owing to the large number of units in which economic resources are extremely limited.

This discussion does not undertake to suggest the exact amounts that should be set up as a guide for future appropriations by the Federal Government. As previously explained,

the data necessary for an accurate and defensible estimate of the ultimate needs for support are not now available. The indication is clear, however, that the present provision falls far short of meeting the needs, and that the Federal Government should provide a much larger amount of support for educational purposes than it now provides.

If the policy of designating funds specifically for vocational education is continued, the amounts for this purpose should be markedly increased, although it would be advisable not to increase the appropriation designated for vocational education until there has been a relatively generous appropriation of funds for general educational purposes.

The greatest advances and the soundest programme in vocational education can be fostered better in the long run by relatively large Federal grants for general, unrestricted educational purposes than by grants specifically limited to vocational subjects. If grants for general education are provided by the Federal Government, their purposes should be broadly defined so that in addition to other phases of education they may be available not only for instruction in vocational subjects, but also for the supervision of club work and home projects, for guidance services, and for placement activities in connection with public employment agencies. The grants should be available for vocational education in public junior colleges and technical institutes maintained primarily for students 20 years of age or less.

Federal support should be given for both general and vocational education, rather than specifically for narrowly defined and highly specialized types of vocational education. Any other policy leads to unnatural and rigid divisions of the curriculum, to lack of well-rounded development on the part of pupils, and to complicated, unsound forms of administration. In the absence of appropriations for general education, enlarged Federal support for vocational education will in many areas increase the existing lack of balance between elementary and secondary education and between types of secondary education.

Increased funds for the support of vocational education cannot be utilized most effectively without a considerable relaxation of the existing Federal restrictions on the programme. In providing funds the Federal agency should work cooperatively with the States in planning the types of vocational education to which the support will be applied. The provision of additional appropriations should mean that the States and local communities will obtain Federal funds for the support of a broad programme based on a plan in each State that has been drafted jointly by State and Federal agencies. The matching requirement should be gradually reduced so that the State and local systems can expand their programmes to take advantage of increased Federal appropriations without training their own resources.

Expansion should not take place until substantial progress has been made in remedying the major deficiencies in the present programme. This is particularly true in the field of vocational education in trades and industries. Extensions of this programme should be made very cautiously and only with the advice of those competent to evaluate the proposals in the light of probable effects on labour conditions.

NOTE AND REFERENCE

1. In addition to the studies published by the Advisory Committee on Education, the attention of the reader is directed to the forthcoming volume entitled *The National Interest in the Education of Youth*, by Newton Edwards, to be published by the American Youth Commission of the American Council on Education.

Organized Labour on Vocational Education

Vocational Education in Secondary Schools

The Trade School as a Training Medium for Skilled Occupations. As a method of recruitment for the skilled trades, the all-day trade school at the high-school level is well nigh a failure. It operates without definition of responsibility either to industry or to adult labour already engaged in the trades. Within its own vacuum it produces a legion of graduates, unrelated in numbers to any competent standard of employment needs. It turns out graduates with false ideas as to career opportunities in trades for which training has been taken.

The skills of the manual trades can be learned only through doing. The technical knowledge necessary to the all-around modern craftsman must be acquired in definite integration to the training on the job. The purpose of all related training should be the development of the young worker as a mechanic, not as a half-baked engineer or architect. Under the trade school and co-operative school method, the work attitude is that of the school-boy rather than that of the wage earner. The first requirement of the trainee for skilled occupations is to have reasonably permanent employment in that occupation. All

vocational development should begin from that point. This approach is disregarded in the educational policy of most public schools.

Employers agree with labour that the trade school method is inadequate. In an interview with a staff member of the Advisory Committee, the Secretary of the Metal Manufacturers Association of Philadelphia stated that a great deal of money was wasted in trade classes since the training given was inadequate even for a pre-apprenticeship programme and the boys he had seen were far inferior to those who had a general high school education.

A representative of the Printers Board of Trade, San Francisco, California, in a letter of March 5, 1937, to the Advisory Committee, states:

We feel that the training of apprentices in the public schools should not be undertaken ... there is no advantage in having only a handful of students trained for the industry while a large number of students will get a very mediocre training and seldom find their way into the industry anyway. . . .

Vocational training can best be done by the industry itself and if the government can work out some plan whereby those who desire to become affiliated with the industry can secure their training in the industry, that perhaps would be the most helped.¹

The Philadelphia Committee² interested itself in a survey of education including vocational training. To find out the results of present vocational training in manual and industrial arts, the Philadelphia Committee approached the schools for lists of firms employing boys who had had such training. Following an interview³ with the Director of the Philadelphia Committee, a staff member of the Advisory Committee reported:

... the results of this investigation have been very disappointing. It was found that the training given is absolutely inadequate, that the student material is very inferior

to that found taking academic high school courses, and that employers as a rule do not employ students who have had only this sort of training. ... The Philadelphia Committee was furnished with a list of employers to whom boys and girls who had had vocational training had been referred in the past... [Some quotations from] authentic interviews with these employers [of boys] speak for ... [themselves]:

Case 1. An employer of auto mechanics: "From my past experience we have learned that it is more profitable to train our own men. . ."

Case 2. Plant manager of a machine shop: "My experience with ... trade school men is limited. However, the few I have had indicate to me that they are master mechanics... I prefer a man with good sense rather than a superficial training or skill. . . . The training of the hands does not mean a thing if the person does not fit into the job."

Case 3. The personnel director of a large miscellaneous-metal shop: This man said that in selecting their boys for apprenticeship courses, they have confined themselves to the boys who have taken and graduated from the mechanic arts course or the academic course in high school. After a great deal of experience in selecting young men, he has decided that the boys who do not have the ability to finish these courses of study will not have the capacity or ability to undertake any definite training. He is of the opinion that the boy who only has the capacity to undertake a so-called trade course could not measure up to their demands, and he has found in most cases that they have ended up in minor repetitive jobs and seldom go on to a more skilled position.

Case 4. Plant manager of a metal working company: "During the past six years, we have not been able to employ any apprentices or assistants in our plant, but previous to that, I had found that a lot of these boys with industrial training lacked the broader educational training which should go with manual skill. From my experience as production manager, I think this is very necessary. A mechanic is of no value unless he has been trained to think."

Case 5. The personnel manager of a large foundry and machine shop: "... regardless of what training [boys may] have had in shop practice it is necessary for them to start at the bottom. We prefer to have a boy who has not had any definite school training in the trade for our apprentices."

Case 6. President of a cabinet works factory: "We have tried these trade school graduates but cannot use them. Until two years ago, due to the depression, we did not take on any new men. We have added several lately and have found that it is better to take a boy who loves the work and likes tools, and train them [sic] in our shop, rather than to start one who knows a little about machines and tools and correct his faults. Many of the boys from the trade school want to start at the top, but they do not have the qualifications. . .

Case 7. Superintendent of a large printing plant: "We employed a group of high school vocational graduates, selecting the boys who have had the printing course in school. After very careful elimination in the selection, and following a reasonable period of employment in the shops doing odd jobs, etc., to accustom them to the work and to permit them to find themselves, we found only about one out of four that had had any useful training. . . . English is very necessary to a typesetter; they showed a very poor knowledge of that essential. These findings were the result of an experiment with more than two hundred boys."

As a result of this study the Philadelphia Committee protested against the expenditure of taxpayers' money on such ineffective training. The Director of the Committee pointed out that two new vocational high schools are being built in Philadelphia, to be ready in the fall of 1937, but not even a plan has been worked out as to what is to be taught, who is to be taught, and how many are to be taught.

Labour representatives agree that trade schools cannot produce skilled workmen. A business agent of a machinists' union, recently interviewed, believes that some of the worst effects of the trade school result from the erroneous assumption

that they are turning out mechanics. He insists that the trade school graduate of machine shop courses is not a machinist, and that a definite apprenticeship training in the shop is a necessary supplement to a trade school course. It is this representation of the boy as something which he is not, to himself, to the prospective employer, and to his parents, which causes most of the evils and hardships which the boys suffer. This union representative pointed to the indiscriminate enrollment of students. He found the co-operative school-and-shop system particularly objectionable for the machine trades. He admits there is sometimes a shortage of machinists, but the shortage exists only among thoroughly trained machinists and toolmakers. The kind of machinists trained in trade schools are a drag on the market.

Employers and educators, he states further, have deluded themselves into thinking that this training could be made a part of the educational system, thus saving industry this expense. Incalculable sums of money have been spent on equipment, and large numbers of workers able to find employment only as machine tenders or lathe hands have been developed, while in the meantime apprentice training as a source of skilled machinists has been neglected. This labour representative insists that jobs should come first and that vocational training shall then be adapted to direct training in industry.

The labour officials of the construction trades insist that an organized apprenticeship system is the training method for their occupations. One man who had been a journeyman and foreman in the construction industry for 26 years stated that he had never seen a trade-school-trained mechanic in his field. Officials of printing unions complain of the practice of vocational educators of "peddling" education, and inducing boys to take printing courses, of persuading employers to take on these boys, and in general of ignoring and frustrating the legitimate training requirements for this very intricate trade.

In 1935 a committee was appointed to investigate industrial education in the Boston schools. Its report states that four

meetings of the survey committee were devoted to hearing representatives of labour present their views concerning trade training in the schools. The report states that:

These representatives . . . believed that the number admitted to trade training courses should be determined by the annual demands of the different trades for new workmen.

Productive work in the school shops was looked upon with disfavour by the speakers because they believe it takes away work from the commercial shops. . . .

It was recommended [by these labour representatives] that boys graduating from trade courses should have impressed upon them that they do not graduate as journeymen, but that they have received basic training which will be of value to them in further apprenticeship training.

Some of the speakers felt sure that exploitation of co-operative students and graduates exists. They said that some firms hire boys at low wages to do the work that should be done by journeymen at journeymen's wages. They also said that in some shops boys are kept at one operation rather than given experience in different operations. They requested that the schools refuse to co-operate with such firms. . . .

The labour representatives were sure that trade training without actual shop practice is futile, and. . . [they gave their approval to the sheet metal workers' plan of regular apprentice training combined with technical training in the school].

All of these labour representatives expressed their willingness to cooperate with the school department at any time in planning trade courses. They believed that labour representatives and employers should frequently be called into conference with school officials in order to help estimate the needs of the various trades, the trends in the use of machinery, and the changes in trade practices, and in order to plan additional training for apprentices and journeymen.⁴

The labour representative on the Boston survey committee was the secretary of the Typographical Union. He made a supplemental report, from which the following quotation is taken:

Boston should revamp her present system to meet present and future requirements.

As there has [sic] been revolutionary changes in our social, political and economic structures, it is only natural to believe that our school system will likewise be affected. Up until recent years the opportunities for placement of the boy and girl into industry on completing an intermediate school course was far more favourable than at the present time. . . job opportunities are very limited under the 20-year age.

The policy of graduating pupils at 16-17 years of age, believing that they are equipped to enter industry in their chosen fields, has a strong tendency to lead to disillusionment. . . this experiment of education has been long and costly. . . .

At the present time there are far too many pupils being encouraged to fit themselves for trade callings. . . .

Apprentices are not generally accepted into trades until 18. There has been no real, or effective, coordination between industry and the schools to absorb the graduates. . .

. . . the most effective method of carrying trade training to a successful completion would be a tie-up with the industry and the schools of those apprentices already in the industry. With the boy spending a certain period in the schools for the academic end of the trade in related subjects and the remainder of the time at practical work in the industry, he should turn out a promising journeyman; and his chances of continuing in the trade would be greatly strengthened.⁵

Placement of Trade School Boys. Labour representatives of wide experience state that boys are "trade-encouraged," that the boy's natural interest in machinery and mechanics is played upon, and that he is, in fact, lured into the vocational courses. Since this is done during the 14-to-16-year period, which is generally recognized as one of immaturity and instability, it is particularly questionable. Sometimes teachers who have an economic stake in the enterprise respond to the very human impulse to recruit students without due regard to consequences.

About the only statistics in the placement field are vocational education's own. In some instances 100 per cent placement has been claimed even during the depression. There is, admittedly, very little check as to the type of placement, follow-up as to permanence of employment, or appraisal of the value of the training to the career of the mechanic. On the other hand, there is plenty of evidence from employers and from unions that trade-school boys are not good employment material, are not properly trained, and are not guided into apprenticeships so as to reach journeyman status.

Social Philosophy in the Curriculum. There is general complaint by labour officials about the aloofness of vocational education authorities from labour contacts. Teachers and officials in vocational education do not appear to know the objectives of organized labour. The dissatisfaction with this general attitude is not minimized by the occasional visits of industrial educators to labour conventions and the preparation of canned resolutions containing blanket endorsements of the system.

If the vocational system is in any sense to serve as a training ground for young candidates for industrial employment, it can hardly be said to be doing its job, by any educational test whatsoever, if it fails to prepare them for industrial life with a good working knowledge of economics, all aspects of the employment situation, modern labour relationships, collective bargaining, and other sociological factors which affect their welfare. Such commonplaces as knowledge of the provisions of

the workmen's compensation law of their State, the limitations as to hours, the legislation relating to wages, and the safeguards in hazardous industries, should hardly need enumeration as valuable elements in the education of the industrial worker. Yet there is little evidence that these subjects get time or consideration in vocational school courses.

The changes needed most of all is an about-face in the thinking of industrial educators on the whole range of labour problems. Indicative of this need is the following quotation:

Somewhere in our school programme we must provide our future citizens with a philosophy which will enable them to appreciate the reasons for the concentration of effort in larger units. They should be made to understand also that any redistribution of wealth is likely to react to the disadvantage of society in general and will certainly stifle the application of the individual initiative, which is one of the pillars upon which our present high standard of living has been built. . . .

We must remember, too, that the training of a worker involves more than the acquisition of skill. The development of the right attitude toward work, toward the employer and toward the fellow worker is equally important and may well be stressed by the industrial arts teacher in his efforts to train young people for work.⁶

The obvious defects of the vocational education system naturally grow worse during a period of economic depression. The educational system, struggling to survive and justify itself, seeking constantly to find new outlets for this mass of inexperienced employment material, inevitably gets itself entangled with "chiseling" employers. When the patience of the labour movement is exhausted and an outcry is raised, the reaction of the educational system tends to be one of injured innocence, although its whole course and policy in the last dozen years did not point straight to this debacle. It is not sufficient defense for vocational educators to say that the worst instances were

mistakes or misunderstandings which were corrected immediately when the facts were known. The causation of such errors is to be found in the insistence that vocational education is a system apart, subject to no scrutiny, advice, or regulation, and that its methods and results are subject to no evaluative criteria.

When business begins to expand, industrial educators join with chambers of commerce and employers in pressing the idea of a skilled labour shortage. Their remedy is to build a few more vocational schools in every city in the land. Why is it that the employers who are going to need these mechanics do not come forward and furnish, under decent labour standards, the apprenticeships necessary? Literally hundreds of news items quote the statements of vocational educators on the need for more school buildings to train mechanics. Not once is there a mention of the Federal Committee on Apprentice Training and its machinery and methods for the stimulation of proper training for skilled labour. At the same time that this campaign to build more vocational schools has been going on, money is not being found for the related training of apprentices actually employed in trade and industry under indentured agreements and started on their way to a mastery of their trades.

The country has had seven years of depression with an oversupply of workers, while fine talents have decayed. It is reasonable for labour to reply to the labour shortage propaganda that there is no labour shortage while many men are without permanent employment. Temporary shortages may exist, and localized shortages. A railroad boilermaker on furlough may be unwilling to forfeit his seniority rights and jeopardize his pension status by leaving his home and travelling hundreds of miles to work in a shipyard, but such instances do not constitute a labour shortage. Labour will not dissent from the general principle that a system of training for the skilled trades needs to be re-established. But it insists on its right to guide such systems jointly with its co-operating employers. Under such terms, apprenticeship will not dam up a reservoir of labour, but will provide a number of mechanics sufficient to meet all needs. Union apprenticeship rules

normally provide for adequate, but not excessive, feeding-in of apprentices. The unions could not continue to maintain acceptable labour standards if they could not supply the mechanics. Due to the dislocations of the depression many apprentice plans have broken down. They are now being revived as fast as conditions warrant through the activities of the Federal Committee on Apprentice Training. Reestablishment of apprentice plans is contingent much less on the union than on the employer. Few employers of skilled labour, dealing under unions regulations, are utilizing the full number of apprentices allowed them under these regulations.

If the trade schools were to co-operate heartily with the unions and to allay their fears regarding the creation of artificial surpluses, the institutions would probably be kept busy furnishing the related instruction needed for the bona-fide apprentices who would be sent to them by the unions and employers.

The apparent contradiction in the statement that union-worry about the surpluses of labour turned out by trade schools, and at the same time that the trade school boys do not make the grade and remain in the skilled trades, must be explained. What happens is that the trade school method produces a group of marginal workers, who cannot work on heavy construction or meet the rigid requirements for mechanics in metropolitan areas, but who set themselves up as "carpetbaggers," in the trades union parlance, or who drift out into the "sticks" and "steal their trade." In times of depression, they work for small wages and are a competitive factor. In times of boom, they manage to "hang on to the band wagon by an eyelash." They are known as "boots," "grunts," "improvers," "helpers," and a variety of other terms which indicate that they are substandard mechanics.

The remedy for this situation lies in a gradual elimination of pre-employment training by trade schools, in broadening the general educational base for mechanics, and in minimizing mechanical education during the high school years and

emphasizing general education. Selection of candidates for apprenticeship should be on the basis of good average-mentality, fortitude and intelligence enough to finish a high school course, appreciation of the dignity and social value of a good trade as a means of livelihood, and a reasonable presumption of mechanical aptitude.

This policy of cooperation would be strengthened if the teachers in the apprenticeship classes were drawn, to the greatest degree possible, from trade union sources. Many of the courses which relate directly to the trade can be taught by tradesmen who have been given the necessary supplemental training in teaching techniques.

Apprenticeship is the heart of the organized labour movement, and the unions can hardly be expected to be enthusiastic about turning their young apprentice mechanics over to instructors about whose trade qualifications they are in the dark and whose social and economic views may be greatly at variance with trade union fundamentals.

Girls' Trade Schools. Few of the criticisms of trade schools made in this report apply to girls' trade schools. The training given in these schools on the whole appears to provide a useful pre-employment equipment. The numbers trained do not appear to be disproportionate to the need, and from all appearances they secure employment. The training in general seems to be careful and thorough. Perhaps because there are no false incentives, such as playing upon the love of machinery in the case of boys, a wholesome purpose is maintained in girls' trade schools.

In some of the girls' schools, labour standards are taken into consideration in determining trade courses to be taught and in placing students. For instance, in one school the course in millinery was at one time discontinued because the wages in the trade were too low to warrant training. In the same school, the employment service refuses to refer students to shops where wage rates are below the prevailing rates, and

students are followed-up after they are played. Such a policy might well be followed by other schools.

Although few trades now open to girls offer opportunity for apprenticeships, apprenticeship should be fostered in such occupations as have possibilities for this type of training. Cosmeticians could be provided under apprenticeship with a good related training in simple dermatology, chemistry, preparation of cosmetics, and the like. This is now a licensed trade in many States and one in which commercialized schools are numerous. Other girls' trades suitable for apprentice development are upholstery, drapery making, sewing, and perhaps bookbinding.

Co-operative Part-time Classes. Some educators consider that the problem of training on the job is solved by the co-operative part-time programme under which a high school boy or girl spends one half day in school and one half day on a job. Labour does not agree. Here, as in trade, school, the approach to the job is that of a school boy, not a worker. In addition, the co-operative classes have been used in some cities to place high school boys and girls in jobs without a wage. Again, young people have been employed at routine jobs which offered no opportunity for training.

Co-operative classes may also be used to break down apprenticeship standards. This is clearly shown in a report of the discussions of a Committee on Part-Time Education at the National Conference on Trade and Industrial Education held in Minneapolis in 1936. The discussion was devoted for the most part to "diversified part-time occupations," a term used to describe a course in which girls and boys work in various industries under the direction of a "coordinator."

The report states that:

Apprenticeship, being organized systematic training for and in a skilled occupation, the committee feels that this training can be equally well accomplished by various methods.

The diversified part-time occupational programme, during the past two years, has met the requirements for apprentice training in many fields. It makes possible apprentice training in small communities as well as in large industrial centers.⁷

The committee then proceeded to discuss the topic of pay while students are in training, as follows:

Premises

- (a) The committee agrees that the term "apprentice" shall apply to any person 16 years of age or over who shall have entered into an agreement of more than three months duration whereby he is to receive from or through his employer, firm, or establishment, in consideration for his services in whole or in part, instruction in any trade, craft, occupation or business, and whereby the learning of such trade, craft, occupation or business is the primary and essential part of the conditions thereof, and of the benefit to be derived therefrom.
- (b) Inasmuch as a trainee in this programme meets the conditions set forth above, the committee agrees that such trainee (should/may) be classified as an apprentice.
- (c) The committee is in agreement that this programme does not presume any relationship between completion of apprenticeship and high school graduation.
- (d) The committee is in agreement that payment may be made in money, goods, or training service.

Conclusion

All apprentices or trainees in co-operative diversified occupations programmes should, under normal conditions, receive monetary wage. Wage rates and methods of payment must be determined in each individual case by state and local

authorities in accordance with legal requirements and trade, craft, or occupational policies.⁸

This definition of apprentice is entirely contrary to trade union standards. A training period of 240 hours is not an apprenticeship. The suggested voluntary apprenticeship bill which was drafted by a committee on which labour and employers had equal representation defined an apprentice as:

... a person at least 16 years of age who has entered into a written agreement, hereinafter called an apprentice agreement, with an employer, an association of employers, or an organization of employees, which apprentice agreement provides for not less than 4,000 hours of reasonably continuous employment for such person and for his participation in an approved programme of training through employment and through education in related and supplemental subjects.⁹

The apprentice programme set up in this proposed bill has the full support of labour because it sets up adequate safeguards for the apprentice and for the journeyman and assures adequate trade training with related school instruction. In theory, the suggested bill carries the endorsement of vocational educators. In reality, vocational educators in some of the States continue to advocate that the entire control of apprentices be placed within the vocational education division; that the labour and industry commodities be advisory only; and that the hours required for an apprentice period be reduced.

Proposals for Secondary School. Labour recognizes the difficulty which the schools face in working out a curriculum adapted to the needs of all boys and girls of secondary school age. The entrance age to employment has steadily advanced and it is generally acknowledged today that boys and girls do not begin work until they are at least 18 years of age. This means that the secondary school as well as the elementary school must provide for groups of varying capacities. Labour does not believe that this need can be met by giving so-called

trade training to all high school students who do not fit into the traditional college preparatory courses. Nor is labour willing to accept the harmful effects upon the trades which result from such a policy.

The question will immediately be raised whether those boys who are manually minded can profitably study the regular high school subjects. In this question there seems to be involved a caste system. The poor student whose economic status is low is shunted into the trade classes. He cannot learn mathematics, but it may be that he will make a good brick-layer. What becomes of the boy from a well-to-do family who does not do well in general high school subjects? What does the vocational guidance system decide to do with manually minded boys from such families? They are rarely to be found in the boilermaker classes.

The question of the educational loss suffered by the boy who takes the trade school course or the co-operative course is a vital consideration in the attitude of labour. Labour certainly did not lend its support to vocational education in order that its children should have less educational opportunity. Labour might be disposed to accept trade school boys as apprenticeship candidates if it were not by so doing condoning this system of which in essence it disapproves. A boy who takes the trade school course loses at least two years of high school time that should be devoted to general education. This is an unjustifiable waste of human material. Even if the trade training job was well done, the sacrifice of this school time would not be justified. When the time is lost only to give him a mistraining in a trade, labour feels that this educational policy is doubly deplorable.

All practical observers, both employers and experienced workers, agree that a boy with a general high school education is a better apprentice prospect than a trade school boy with a smattering of the trade. This is naturally so. The degree of judgement and quality of skill required in the skilled trades

connotes a well-developed individual with normal mental capacity and a sound general education. The Navy Yards, which are giving the best apprentice training the country affords, do not reduce their hours of training because of time spent in trade school. A trade school graduate enters the apprentice course on the same basis as any other boy.

A practical manual training programme, one which provides a knowledge of certain everyday principles of mechanics that are necessary for general use but are not vocational, is desirable for all boys, and for girls, too. They should be taught to operate a car, a typewriter, household equipment, etc.—in short, to be able to use those machines and tools which are a part of the everyday life. But labour and many employers object to the offering of a school trained handy-man as a mechanic.

There are also some educators who believe that the trade school is not effective in training skilled workers and that strictly vocational education should not be given to high school boys and girls who are not employed.

The Director of Vocational Education in Cleveland Public Schools, in addressing the Department of Vocational Education of the National Education Association in 1926, said:

We have established in some cases all-day trade schools with the objective of substituting the school for training on the job. Honest research upon the part of those who have experimented with this form of training frequently reveals the fact that the diplomas issued have as little significance as the diploma and the blessing of the average academic high school insofar as actual trade placement is concerned. . . .

If we would effectively train apprentices for efficient service as skilled craftsmen in our community, it is imperative.

- A. That any programme set up for the training of workers in any one industry must have the thorough backing of those who will employ the product of that training.
- B. That the demand for training should be propagated from the trade end rather than from the office of the city vocational director. In other words, the school should not "peddle" vocational education, but should establish a training programme in response to the urgent demand of those in a position to guarantee continuity of employment for those receiving the training. We should work from the outside in, rather than from the inside out.¹⁰

The President of the Vocational Section of the National Education Association and City Director of Vocational Education in Portland, Oregon, has these interesting comments to make in a letter of February 18, 1937, to the President's Committee:

The educational agency responsible for the administration of vocational training programmes should work hand in hand with employer-employee, advisory and coordinating agencies. This is fundamental if vocational education is to meet the training requirements of industry for skilled employees. It is highly probable that federal and state departments of labour should be given a larger place as advisory agencies to state and federal boards for vocational education. . . .

Speed in production skills, can best be acquired on the job, though there are many skills and much technical information which can be provided in trade preparatory or trade extension classes. . . .

There is no justification for trade training programmes unless they are properly controlled and acceptable to industry. . . . In general, the advice of industry has not been sought or its needs understood by the administrator...

Skilled craftsmen and industrial employers rate the training values in these schools in terms of craftsmanship, from five to twenty-five per cent of a well trained journeyman.

The field for vocational education is therefore, largely that of apprenticeship and trade extension classes; the latter both for employed youth and adult workers.¹¹

The manner in which one city has successfully met the problem of vocational education is described as follows:

Salt Lake City has no trade or technical school. It has been generally agreed in the city that such a school would not meet the situation because of the youthfulness of the high school graduates. Then, too, if disappointment is to be avoided, young people must be trained in numbers somewhat adjusted to employment opportunities in the trade area. It is difficult to restrict enrollment in the departments of a trade school. It was agreed, therefore, that a post-high-school programme of occupational adjustment should be planned and started. . . .

I. Purpose

The work is planned to prepare high school graduates who are going directly into business and industry for success in their life's work. Young people will not be given special training in any one field in indiscriminate numbers because only further failure results when more people are trained in any one line than can be employed in that line. The vocational educational programme therefore is planned in harmony with the demand for labour in the community.

II. Relation to Regular School Work

The vocational training classes are administered as part of the Evening High School programme. They are organized only as the coordinators working with employers and organized labour call for training classes. The regular evening high school fee is charged. Regular students in the vocational or occupational work must either be high school

graduates or beyond high school age. Others who are admitted must be recommended specially by the Department of Public Personnel. The courses in regular high school are considered a necessary background for occupational placement.¹³

Future Craftsmen of America

Vocational education activities among high school students are not limited to the classroom. The "right attitude" toward the employer and toward fellow workers, which the industrial arts teacher is advised to foster, is exemplified in the promotion of the organization known as Future Craftsmen of America.

It is stated with authority by labour officials who have studied this plan that it takes on the connotations and language of open shop employers. This organization is being actively promoted by many vocational teachers in the country, although organized labour has protested against the set-up.

The Future Craftsmen of America had its beginning in a nut and bolt club in a trade school in Oregon. A regional director of the United States Office of Education saw possibilities in the plan and was instrumental in extending it throughout that State. Later it began mysteriously to take on national character, and late in 1936 a national convention was held in Detroit, at which anti-labour employers furnished the entertainment and a good many of the inspirational addresses. Early in the organization plans for the Future Craftsmen, word was put out that the American Federation of Labour approved the organization, and later it was definitely stated that John Frey had approved the plan. When Mr. Frey was advised of this and a copy of the constitution placed in his hands, his comment was anything but favourable—closing with the following:

Whoever informed you that "Mr. Frey looks with approval on the plan" must possess a lively imagination coupled with an unreliable memory. You are at liberty to quote me as saying that I not only disapprove of the constitution, but

of any programme to organize the apprentices of the several crafts into a national organization or to approve any plan which would, in any manner, remove apprentices from the direct supervision of the respective craft unions.¹³

This barefaced attempt to draw apprentices away from their natural labour affiliations into an employer-influenced national organization is considered at length in a letter from Henry Ohl, Jr., labour member of the Federal Board for Vocational Education, to George P. Hambrecht, President of the American Vocational Association:

Owing to my inability to be present in San Antonio, I want to take this occasion to express my deep concern about the development of the organization or proposed organization known as "The Future Craftsmen of America." I presume this subject will come up for discussion. It is, in my opinion, of such importance that only stressing circumstances cause me to write instead of personally presenting the views herein expressed to the American Vocational Association at the coming convention.

Although there has been some talk of changes from the original draft, to which I objected when it first came to my notice, I have no knowledge of a revision that would make the plan acceptable. The statement that labour's objections had been met by omission or alteration is not reassuring when the events leading up to the Detroit convention are considered. . . .

You have advised me that you had assurances from the organization committee that the apprentices are to be left out; also of some other changes, including the employer endowment feature. . . .

It was my intention to make an analysis of the whole plan, but delayed when I understood that the work of actually launching the organization was to be held in abeyance. In this brief presentation I can only refer to the reasons for our protest. The obvious trend (I do not say

intention of the committee) of the contemplated organization is indicated by several of the outstanding "purposes" in the draft submitted to me:

No. 5. To impress upon industrial youth the relation of the craft of each of the whole pattern of industrial life and the importance of that relationship to the economic, social and moral welfare of the country.

No. 10. To advance the cause of trade and industrial education and apprentice legislation.

No. 13. In general to assist the apprentice in acquiring as high a standard as possible in respect to the following: Accuracy, thoroughness, judgement, quality of workmanship, speed, loyalty, and personal and working relationships.

An organization created on the basis of an outline as the foregoing, in my opinion, is futile for the future good of America's youth. This initial outline does not appear to have been dictated from a knowledge of labour's historical struggle.

We should bear in mind that until the advent of the vocational school organized labour was the only agency that concerned itself with both the development of youth into competent journeymanship and their future economic welfare. In fact, competent craftsmanship has always been one of the primary objects of the labour union all through the ages. The labour movement has another objective, at least quite as important as that of giving supplementary instruction to practical experience on the job; namely, preparing youth for the inevitable hazards and pitfalls when they enter industry. The latter phase in the education of our young people has not been included in the curriculum of the vocational school. It is still a function of the labour union . . . This type of education must not be entrusted to unsympathetic agencies nor placed into incompetent hands. . . .

The matter of "speed" as one of the primary objects of vocational schools was fought out two decades ago. . . we did not accept "speed in production" as a primary object of vocational education. . . .

Here is one place, in my opinion, where a limitation must be placed on employers' participation; namely, . . . what constitutes proper "personal and working relationships"; of determining the type of "relationship to the economic, social and moral welfare of the country"; or to draft legislation for that purpose, or to decide what constitutes "loyalty" and to whom and when such loyalty shall be shown. . . .

Is it significant that they [employers] displayed such deep interest in the future craftsmen when they are so overtly antagonistic to present craftsmen?

Organized Labour, to my knowledge, had no voice in the discussions of the objects or consequences of the organization, nor in shaping the plan. I am not at all certain that a nation-wide organization can be established with a satisfactory programme unless its nation-wide sponsorship is agreed on a policy and understands its possible effects....

I regret exceedingly that developments require a display of disagreement; but an organization of young people seeking guidance to avoid the dangers confronting them when entering the portals of industry not altogether congenial to economic serenity and security, is a serious matter. It is not an imaginary vision. It comes within the scope of Organized Labour's traditional functions from which we cannot readily be divorced. We do not surrender this inborn interest. . . .¹⁴

Vocational Education in Industrial Plants

Plant training as carried on in several States has been a strange development in vocational education. It parallels the trends toward migration and decentralization of industry that have been going on for several years.

Workers are trained for the new or migrating industries in plant-training programmes conducted under public supervision and control. In several of the least industrialized States, chambers of commerce, power companies, agents of railroads, and real estate interests have sought to stimulate the movement of industries from older industrial communities to their own. Special inducements have been offered in the way of tax exemption for given periods, factory buildings as gifts or financed by city bonds or public contributions, the assumption of responsibility for pay rolls by local agencies for limited periods of adjustment, and a supply of workers trained for the factory at public expense.

Training in such plant programmes under Smith-Hughes funds were characterized by anti-social practices. Workers were trained on production without pay for six to twelve weeks and then transferred to the pay roll at beginners' wages. Goods produced under the auspices of the public school vocational education system and without the payment of wages were sold on the open market. Instruction consisted of the repetitious performance of a single operation for the purpose of securing speed in production. Superintendents or foremen, whose qualifications did not correspond to those set forth in the various State certification systems for vocational education teachers, were appointed as instructors and paid at public expense. Persons employed as instructors served also as foremen on production. Public schools rented quarters in which to train workers for particular plants. Schools were responsible for marketing the production of training programmes.

The lack of comprehension of the difference between vocational education and speeding up production resulted in programmes which disregarded the development of workers. The lack of knowledge of school officials about industrial organization, particularly as it relates to legitimate charges against cost of production, such as plant investment, taxation, labour training cost, and the like, was traded upon by groups promoting industrial migration.

The purposes of industries in seeking new locations, although seldom inquired into by educational authorities before setting up training programmes, cover the familiar range of labour difficulties—the desire to escape higher taxes, the disadvantage of prison operation since the passage of the Cooper-Hawes bill, bankruptcy status in the original location, as well as the desire for an abundant supply of cheap and unorganized labour. It has been possible under plant-training programmes for an employer, with a strike on his hands because of a demand for higher wages, to open up his plant in another locality by transporting a small number of workers skilled in his processes, and having these workers certified as teachers in the new locale and workers recruited and installed as student employees without wages.

This whole question of migrating and decentralizing industries and the social implications inherent therein has apparently never been explored by the educational authorities. They have been satisfied to set up their training programmes on the mere request of the industry. They have sometimes co-operated with the campaign of the local agencies to induce industries to move in or to expand by opening up an additional plant in their locality. They have failed to see the educational anomaly of classifying as vocational training a mere process of acquiring speed on a routine performance in the factory, in which proficiency can be attained in a few weeks. They have been willing to relieve industry of the necessity for bargaining with their employees in one community by supplying them with a fresh source of labour in a new community. Under these plant-training schemes foremen become teachers overnight.

The vocational education divisions of State departments of education have issued statements such as the following:

The purpose of this programme is to give organized training and instruction to the employed worker so that he may become a proficient producer in the shortest time possible. To do this efficiently, it is usually necessary that this

training be given on the job under actual working conditions. . . .

The State Department . . . will assist in the organization of plant-training classes for employed workers when requested to do so by industry through local school authorities. . . .

These classes are organized for those who have entered the industry or those who are about to be employed and can profit by the training. . . .

The length of course will depend entirely on the time required to learn the job. This may vary from a few weeks to several years. . . .

The superintendent of schools consults with the industry regarding the selection of supervisors and instructors who, as masters of the trade, will command the respect of the men in the industry. . . .

[Instructors' certificates are] issued by the State Superintendent of Public Instruction at the request of the local superintendent.

[Such certificates] may be renewed upon the request of the local district or county superintendent of schools.¹⁵

One State, Ohio, has a plant-training programme all its own. It has received very little publicity and appears to be operated on a secretive and let-us-alone basis. No migrating or expanding industries are involved in this State programme, but the representatives of the State Department of Vocational Education have gone out into very small communities, one-industry towns of one to three thousand population, and put in so-called plant-training programmes. These programmes are for the most part nothing but intensification of speed-up, efficiency, and incentive methods. Following the plant-training ritual, the foreman is designated as an instructor. Smith-Hughes money is used on the usual contribution basis.

The employers are delighted with the plan and are quoted as saying that they would never have thought of it themselves.

if it had not been suggested by the representative of the State department of vocational education.

There is no employee representation of any kind on plant-training advisory committees in this State, if such advisory committees exist. Organized labour seems to know little or nothing about this programme in specific detail. The reports indicate that the communities in which these programmes are going on are similarly in the dark as to what it is all about and probably even the workers in the plant are not aware that any social complications are involved in the training programmes. The position of the vocational education authorities appears to be that since industry is satisfied no one else need be concerned.

The Office of Education made a study of the programme in Ohio and gave it a complete bill of health. It conforms to the requirements of the Smith-Hughes Law, according to its report, and the State was to be congratulated upon its success.¹⁶

The Ohio State Supervisor of Trades and industries, in November 1934, wrote:

Employee and apprentice vocational training programmes in our smaller centers are conducted directly in the industrial plants for those in actual employment . . . the industry, co-operating with the public school system, provides the use of the plant equipment, furnishes space for the related-subject classrooms and supplies the light, heat and materials . . . skilled workmen within the plant organization are trained to be instructors, employed by the local board of education, properly certificated by the State . . .

Scores of industries in scores of the smaller communities . . . have unqualifiedly endorsed the plan.¹⁷

Labour Representation on Advisory Boards of Vocational Educational Institutions

The simple justice and, in fact, the expediency of affording organized labour proper representation on vocational school

advisory boards does not often seem to recommend itself to those in charge of vocational education. Most of the evils complained of under the system might be readily corrected or might never have occurred if labour's knowledge of the industrial scene and its common sense approach to these questions had been utilized in the development of vocational education. The healthy skepticism of the secretary of one Building Trades Council might, to everyone's advantage, be set off against the optimism of the secretary of the Chamber of Commerce. If the plant manager of the rolling mill regards anything less than 200 men at the gate in response to an ad for one tinsmith as a labour shortage, why not offset this with the dull but relevant report of the secretary of the Sheet Metal Workers Union that 20 per cent of the membership cannot find employment.

Checks and balances might work in vocational education as well as in our political system. This is to put the claim of labour for representation on no higher a plane than that of caution and usefulness. The genuine concern of organized labour for educational extension warrants the fullest utilization of its facilities by any educational system, particularly the vocational. Yet vocational educators in many communities are narrow-minded foes of the organization of labour. "The company union approves," says one State director of vocational education, when questioned as to labour attitude in connection with one of his plant-training programmes, "why consult the Federation of Labour."

Labour, itself, is not blameless in the matter, for it has tended to isolate itself from vocational education efforts because of the system's anti-labour practices. But the appointment of one labour member, selected by educational authorities themselves, on an advisory committee which never meets, is not organized labour's idea of participation. The attitude of vocational education authorities, ranging from toleration of labour organizations to outright sub-servience to the domination of employers, must be changed.

When organized labour advocates labour representation on advisory boards, it means advisory boards which really advise and labour representatives who really represent. When they say adequate labour representation, they mean equal representation, man for man, with other and divergent interests. They mean representation from the local communities right up to the top of the system. They mean representatives who are selected by organized labour and who have a mandated responsibility to represent labour and to account for their stewardship.

Recommendations

To bring the system of vocational education more nearly into conformity with good employment practice, the following recommendations are made:

1. That all high school time be devoted to general and academic subjects and that strictly vocational training be given after the boy or girl has entered industry, and that this training be closely allied to the vocational needs of that industry.
2. That all pre-employment training for a specific trade be gradually eliminated.
3. That students receive an adequate instruction in industrial organization, collective bargaining, and standards as to wages, hours, and labour conditions affecting their industry, as well as general social and economic problems as part of their trade training.
4. That no contracting of work, outside employment, or production work within the school be engaged in by any trade school students.
5. That sufficient funds for providing the related school training of apprentices employed in industry under apprentice agreements be provided and that such funds be earmarked for the related schooling of apprentices.
6. That jobs requiring only a few weeks training shall not be considered as subject to vocational training.

7. That the system designated as plant training be modified in every State to conform strictly to the standards set up for such training by what is known as the Advisory Committee of Nine.¹⁸
8. That trade extension classes be provided only for those whose daily occupation is in the trades for which training is given.
9. That Federal funds shall not be granted to any State where labour does not have equal representation on all vocational boards, local and State.

The recommendations contained in this memorandum, while specific, will require enforcement and administration of a particularly understanding character. To insure such administration, which will involve not only questions of fact, but also questions of interpretation, some appropriate machinery should be devised, by legislation if necessary, whereby the Federal Department of Labour and State departments of labour will be authorized to handle those aspects of vocational education which relate to labour practices and standards. Such a system would provide the essential knowledge of industry, of sound labour practices, and of the specialized technique of modern labour relationships which is now lacking in vocational education.

Such an arrangement would be an important factor in rebuilding the confidence of labour in vocational education and in generating a renewed spirit of co-operation therewith. It is a necessary first step in reassuring labour that vital employment relationships and other policies affecting labour will be reviewed by a Government authority which is competent, informed, and trustworthy, not only in purpose but in method.

Summary

From the inception of the movement for Federal aid to vocational education, the American Federation of Labour gave its support to the programme. The Federation was aroused to

active support of Federal aid in this field primarily because it was intensely interested in the extension of all educational opportunity, and also because it was concerned about the questionable methods of private or commercial schemes for industrial and vocational education. Organized labour furnished leadership in legislative activity and brought its influence in Congress to bear on the subject, thus helping to pass the Smith-Hughes Act in 1917.

Once the law was safely on the statute books, however, the vocational education programme began to grow away from the original conception. It maintained little or no contact with the labour movement, adopted policies which were detrimental to the interests of labour, and directed its activities into channels which showed little regard for the public interests necessarily involved in a programme for industrial training. The depression heightened the effect of all these errors of policy, and, beginning about 1934, the dissatisfaction of organized labour, and of liberal opinion generally, resulted in outright conflict with the interests in charge of vocational education.

During these intervening years, there had been much complaint about recruiting policies, considerable objection to the overemphasis on vocational training for high school boys and girls, criticism of inadequate preparation for the skilled trades, charges of over-susceptibility to employer propaganda, and bitter protest against the isolation of the system from labour participation and counsel. In some States the situation was worse than in others, but even in the best of them students were enrolled in trade classes without sufficient consideration of replacement needs, school-boy competition with adult tradesmen was permitted, boys were set to work at extremely low wages under the pretext of providing them with practical training, and a cheap labour psychology was developed, both in the minds of the boys and of the employers.

The plant-training episodes of the depression period are well known. In some States they were so vicious as to be self-condemned as soon as they were brought to public attention. They were set up with entire disregard of the social factors involved and were used by fugitive employers running away from labour markets where sound standards had been established, by bankrupt employers deserting their creditors and employees, and by contractors for prison labour who had been driven out of penal institutions by legislation. The production of unpaid "students" was sold in the open market, foremen became "teachers" paid from public funds, and speed-up methods became "vocational education."

Despite large appropriations of Federal funds to the States as grants-in-aid of vocational education, it was next to impossible in some localities to obtain the necessary allied schooling for apprentices employed in trade and industry. Many unions and employers were compelled to set up their own schools in order to give their apprentices technical instruction.

Perhaps more objectionable and insidious than any of its more tangible abuses has been the anti-union habits of thought prevalent in vocational education. This sentiment has been subtle, but pervading. The freezing out of labour participation and of advisory councils has been only one phase of this process. The ascendancy of anti-union business interests has been painfully obvious, and union men who became teachers in the trade schools have sometimes found it politic to drop their cards. Not all of the anti-union slant has been deliberate. It is perhaps rooted as much in ignorance of labour objectives as in conscious opposition to them, but it has contributed to the present-day dissatisfaction of the labour movement with the system of vocational education in the public schools.

Social and economic questions of the gravest importance to the welfare of young entrants into industry have been ignored in the curriculum. However much the question of the rights of workers to organize and to bargain collectively may

be discussed in industry, in the newspapers, in legislative halls, and in the public forum, most of the classrooms providing industrial education ignore the issue. The epitome of this long-continued attitude of hostility and negation is found in the organization of the Future Craftsmen of America, under the auspices of vocational educators and with the benediction of employers, but without the approval of organized labour.

If this 20-year history of vocational education has proved anything, it is that the important questions of labour standards here involved cannot be left entirely to educators who fail to recognize positive evils when they see them, or, when seeing them, are too timid to correct them.

The recommendations as to future conduct and policy in the administration of vocational education provide for deferring specific vocational education until the boy or girl has entered employment; for the elimination of abuses in plant training, outside contracting, and school-boy employment; for eliminating the use of vocational education to provide a reservoir of labour, whether among school boys and girls or adult unemployed, to undercut wages and to lower labour standards; for the establishment of an approved apprentice-training programme in State departments of labour with related instruction furnished by the schools; for a better selection of vocational teachers; and for the refusal of Federal funds to States where labour does not have representation on all boards supervising vocational education.

The enforcement of sound labour policies within the vocational education programme, with good logic, should repose in the United States Department of Labour. Appropriate machinery should be devised whereby the Secretary of Labour may promulgate and enforce regulations for vocational education in that area which impinges on the labour field. This would relieve the Office of Education of the complications incident to operation in a field outside its province, and would provide supervision over the vital policies related to labour

standards and considerations by an informed agency of government. The confidence thus engendered would contribute vastly to the regeneration of the system of vocational education in public esteem.

NOTES AND REFERENCES

1. Data in files of Advisory Committee on Education.
2. A committee of the Pennsylvania Economy League which reports that it is a nonpolitical, nonpartisan taxpayers' organization.
3. Interview held February 25, 1937. The Philadelphia Committee did not issue its findings in printed form.
4. Report of the Committee Appointed to Investigate Industrial Education in the Boston Schools, Boston Public Schools, School Document No. 3 (Boston: City Printing Department, 1935), pp. 159-60.
5. *Ibid.*, pp. 39-41.
6. Thomas Diamond, "Responsibility of Industrial Arts Teacher in Social Problems," *American Vocational Association Journal and News Bulletin*, XI (1936), pp. 104-5.
7. Report of National Conference on Trade and Industrial Education, Minneapolis, Minn., August 17-28, 1936. U.S. Office of Education, Vocational Division (1936, mimeographed), p. 142.
8. *Ibid.*, p. 145.
9. Furnished to the Advisory Committee on Education by the Division of Labour Standards, U.S. Department of Labour.
10. H. L. Briggs, "A Renaissance of Apprenticeship," in N.E.A. Proceedings of the Sixty-fourth Annual Meeting (Washington: National Education Association, 1926), p. 978.
11. Data in files of Advisory Committee on Education.
12. L. John Nuttall, Jr., "From School to Job," *Occupations*, XVI (November 1937), pp. 125-28.
13. Ohl, *op. cit.*, pp. 36-40.
14. *Ibid.*
15. Pennsylvania, Department of Public Instruction. Plant Training Classes for Employed Workers (Harrisburg: mimeographed), pp. 1-3.

16. Memorandum on file in office of the Advisory Committee on Education.
17. E. L. Heusch, "Vocational Education in Trades and Industries in the Small Industrial Communities," *American Vocational Association News Bulletin*, IX (1934), pp. 10, 12.
18. "Vocational Training in Industrial Plants." Joint Statement by Secretary of Labour, Frances Perkins, and Commissioner of Education, J.W. Studebaker (1936 mimeographed).

Some Conclusions

The major findings and conclusions regarding the federally reimbursed programme of vocational education are summarized very briefly in this final chapter. The reader is referred to the preceding chapters of this study for supporting details and for the less important findings and conclusions.

This study undertakes to survey in a fairly broad way the plan of organization for the federally reimbursed programme of vocational education, the outcomes of this service, the needs of the country for occupational preparation, and the manner in which those needs may best be met. The study of vocational education was conceived, not primarily as research to discover new information, but rather as an attempt to collect and interpret existing information and the opinions and attitudes of those who have close personal knowledge of the operation of the programme.

Vocational education is a very inclusive term and, viewed broadly, may cover all those experiences whereby an individual learns to carry on successfully any useful occupation. The secondary schools for many centuries have furnished the necessary basic education for the professions, but it is only in relatively recent times that the schools have begun to offer preparation for non-professional types of occupations.

The Organization and Administration of the Federally Reimbursed Programme of Vocational Education

1. The Federal Government of the United States has long manifested an interest in education, and from the beginning of its history has supplied grants of lands or money for various educational purposes. The policy of making Federal grants specifically designated for vocational education was introduced by the Smith-Hughes Act in 1917. Since that time the Federal Government has greatly increased the amount of support provided for vocational education. The George-Deen Act, passed in 1936, more than doubled the amount previously authorized for vocational education. The acts now in force authorize a total annual appropriation of approximately \$22,335,000 for distribution to the States and other areas and for administrative expenses in the Federal agency.

2. The Smith-Hughes Act established the Federal Board for Vocational Education as an independent agency for the administration of the grants. In 1933 the administrative duties of the Federal Board were transferred to the United States Office of Education. The Federal Board for Vocational Education is not now well constituted for the services of advice and inter-departmental coordination needed by the Office of Education.

3. The staff in the Federal office for vocational education has carried on its duties zealously, but the members have tended to become immersed in routine activities and to neglect some of the broader aspects of the service. There is now urgent need for the introduction of new staff members of a somewhat different type from the majority of the present personnel.

4. The original conception of the plan for Federally reimbursed vocational education was that of a co-operative programme operated under the joint support and control of State and Federal agencies. In practice the Federal controls have been so administered as to shape very definitely the nature of vocational education in the States. The federally supported

programme has to a considerable extent become a federally dictated programme in many States.

5. One of the principal responsibilities laid on the Federal agency by the Smith-Hughes Act was the conduct of studies and investigations. During the past 20 years many valuable publications have appeared containing instructional and administrative aids, but evaluative research pertaining to the programme has been almost entirely lacking.

6. Stability in Federal policies is desirable in any programme carried on in co-operation with the States. The plan of providing support through annual appropriations may at times be disturbing to the stability of the programme.

7. The programme of vocational education affects the interests served by a number of other Federal agencies, particularly the Departments of Agriculture, Labour and Commerce. Arrangements for coordination of the programme of vocational education with the interests of other Federal agencies are at present unsatisfactory and should be improved. The policy of lodging Federal administrative responsibility for the programme in the Office of Education should be continued.

8. Sound plans for Federal-State relationships in any co-operative programme of educational service should leave the major administrative responsibility to the States. The functions that are appropriate to the Federal Government are the making of audits, the requiring of reports, co-operation in planning, and supervision of labour standards. Other elements of control should be strictly avoided in the Federal organization. The present relationship between the States and the Federal Government in the programme of vocational education should be revised to accord with these principles.

9. Within the States and local communities vocational education should be set up as an integral part of the regular school system. The creation of a dual system of schools should be carefully avoided.

10. Institutions that prepare teachers for vocational subjects should have the same relationship to State authorities as they have in the case of the preparation of teachers of other subjects. The Federal agency should exert no control over the preparation of teachers.

Financing the Federally Reimbursed Programme

11. In the year ended June 30, 1937, the latest year for which data are available, the total expenditure of Federal funds for vocational education was \$10,013,669. State and local funds were used to the amount of \$26,385,616. The grand total expenditure for the federally aided programme was \$36,399,285.

12. The Federal funds for vocational education are made available only on the basis of matching by State or local funds or both. In practice the States have far exceeded the minimum requirements for matching, and have supplied from two to three dollars for each dollar of Federal funds, but this average over-matching has been largely due to heavy over-matching in a few States. Matching tends to increase educational inequalities, for only the abler communities can readily provide the funds for matching. For this important reason matching of Federal funds is undesirable.

13. The Federal grants are earmarked for particular fields of instruction, namely agriculture, home economics, trades and industries, distributive occupations, and the preparation of teachers for these subjects. Objections to the plan of designating funds for particular subjects are numerous and important. Serious question may also be raised as to whether funds should be designated specifically for vocational education, rather than being made available for any educational purpose.

14. The Federal funds for vocational education are distributed to the States on the basis of population ratios in certain classified groups. There are numerous objections to the bases of distribution now in use.

Evaluation of the Federally Reimbursed Programme of Vocational Education

15. The federally aided programme of vocational education has increased the number of pupils enrolled in such subjects. Opportunities have been increased notably at the adult level.

16. Excellent work has been done in the development of instructional materials for vocational education under the auspices of the federally aided programme. The housing and equipment of schools have been improved. Educational planning has been encouraged. Educators generally have been induced to take a favourable attitude toward the inclusion of opportunities for vocational preparation in the curriculum.

17. In many respects the general operation of the programme of vocational education is unsatisfactory. A few of the important points of adverse criticism are:

- (a) A limited concept of vocational education has been promoted;
- (b) in some of the financially less able communities funds have been diverted from general education;
- (c) the creation of a dual school system has been encouraged;
- (d) the difficulties of administering local schools have been increased;
- (e) an attitude of separateness has developed among those in the field of vocational education;
- (f) guidance and placement services have been inadequately provided; and
- (g) the reporting of information concerning the programme has been inadequate.

18. The programme in home economics has in general been operated in a relatively satisfactory manner. Close co-operation

between home and school has been fostered by the home projects. The curriculum of homemaking education has been broadened to include much content of a social nature.

19. For the most part the teaching in vocational agriculture has been of high quality. A new and enriched curriculum is slowly emerging and the emphasis is being shifted from the manipulative skills and problems of production to problems of an economic and managerial nature. The development of a national organization of pupils in vocational agriculture, the Future Farmers of America, has been of doubtful wisdom.

20. The programme in trades and industries has given rise to more complaints than any of the other fields. The instruction in trades and industries for out-of-school youth and for adults has on the whole been relatively satisfactory, as has also the limited programme for preparing girls and women for industrial vocations. The criticisms have centered chiefly on the programme for young full-time and part-time secondary school pupils. The chief difficulty has been that in large numbers of schools the programme has been developed and carried on without sufficient regard to the best interests of the group of present and future workers. Enrollment has been permitted without consideration of the potential demand for new workers in the trade for which training is given. Those in charge of the work have often neglected to take advantage of the counsel of interested social groups, such as organized labour, in the development of policies and procedures.

21. The Federal programme for vocational education has resulted in improvement in the qualifications of teachers of such subjects, but there has been an inadequate supply of well-qualified teachers. Funds specified in the Smith-Hughes Act for the training of teachers have been diverted to administrative services in State departments of education by the device of classifying supervision as in-service training.

The Needs for Vocational Education

22. The best interests of society demand that every individual be equipped for some occupation so that he may contribute effectively to the satisfaction of human wants. The public school has proved to be an effective agency for occupational preparation. Much of the preparation, however, must in any case be given on the job rather than in the school. Apprenticeship should be encouraged as a method of vocational education.

23. Three types of school programmes seem to be effective in vocational education:

- (a) The all-day school;
- (b) the co-operative type programme, in which school work is combined with vocational experience in part-time employment; and
- (c) part-time and evening classes.

Special precautions need to be taken to protect pupils from exploitation, particularly in co-operative-type programmes.

24. There is need for an occupational outlook service to provide information on a national, State, and local basis regarding the number of recruits required annually in each of the major occupational fields, and the number in training for each occupation.

25. Vocational education should immediately precede entrance upon the occupation. Under modern conditions this principle precludes the offering of specialized vocational courses in the junior high school period, although exploratory courses may well be provided in the junior high school. Much of vocational education should be restricted to the later years of the secondary school and the junior college. Arrangements must be made for the vocational education of pupils of all levels of ability above the minimum required for self-support.

A special problem is the provision of vocational education for young people in rural areas who will later migrate to cities.

26. Six principles are suggested for selecting the occupations for which training of a pre-entry type should be offered in the schools:

- (a) A certain amount of intellectual content should be involved;
- (b) the training should have general applicability to a variety of occupations;
- (c) employment should be available on the completion of training;
- (d) the time allowed should be sufficient for attaining a satisfactory degree of competence;
- (e) the occupation should be socially desirable; and
- (f) the number of pupils should be sufficient to permit an economical grouping for instructional purposes.

On the basis of these criteria the following occupational fields seem to be desirable for inclusion in the school programme:

- (a) Agriculture;
- (b) homemaking;
- (c) certain phases of trades and industries;
- (d) office occupations; and
- (e) distributive occupations.

On an experimental basis some of the specialized public service occupations might be considered for inclusion in the school programme.

27. The service of the schools in supplying vocational education for occupations of the trade and industrial type should be chiefly to cultivate in the pupils a broad range of basic abilities of value in a whole related family of occupations. The training that is given in vocational education should include instruction with reference to the social and economic situation into which the worker must fit and the legal provisions governing his employment.

28. A sound programme of vocational education must include not only training, but guidance and placement. Schools furnishing vocational education should provide adequately for the guidance of pupils, and should co-operate closely with public employment offices in the initial placement and adjustment of those leaving the full-time school.

29. Data now available do not permit an accurate estimate of the total amount of funds needed for a sound and complete programme of vocational education. It seems clear, however, that the amount now provided is far from sufficient to maintain a suitable programme.

30. The Federal Government must take a vital interest in the development of sound programmes of vocational preparation. The Federal Government is justified not only in furnishing temporary stimulation to such development in the public schools, but also in undertaking the actual support of vocational education on an extensive basis. Increased Federal funds for the support of vocational education cannot be effectively utilized without a relaxation of the existing Federal restrictions on the programme.

31. Federal appropriations for vocational education should not be increased until there has been a relatively generous provision of funds for general education. The greatest advances in vocational education in the long run will come through relatively large Federal grants for general, unrestricted educational purposes rather than through grants specifically limited to vocational subjects. Designation of grants for vocational

education could well be discontinued as soon as there is an adequate Federal appropriation for general, unspecified educational purposes. If designation of funds for vocational education is continued, the legislation should define this type of service broadly. Guidance and co-operative placement services should be included, and instruction at the junior college and adult levels should be particularly encouraged.

APPENDIX

Major Federal Legislation for Vocational Education Grants to States as of January 1, 1938

The Smith-Hughes Act¹

An Act to provide for the promotion of vocational education; to provide for co-operation with the States in the promotion of such education in agriculture and the trades and industries; to provide for co-operation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That there is hereby annually appropriated, out of any money in the Treasury not otherwise appropriated, the sums provided in sections two, three, and four of this Act, to be paid to the respective States for the purpose of co-operating with the States in paying the salaries of teachers, supervisors, and directors of agricultural subjects, and teachers of trade, home economics, and industrial subjects, and in the preparation of teachers of agricultural, trade, industrial, and home economics subjects; and the sum provided for in section seven for the use of the Federal Board for Vocational Education for the administration

of this Act and for the purpose of making studies, investigations, and reports to aid in the organization and conduct of vocational education, which sums shall be expended as hereinafter provided.

Sec. 2. That for the purpose of cooperating with the States in paying the salaries of teachers, supervisors, or directors of agricultural subjects there is hereby appropriated for the use of the States, subject to the provisions of this Act, for the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$500,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$750,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty, the sum of \$1,000,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, the sum of \$1,250,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-two, the sum of \$1,500,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-three, the sum of \$750,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-four, the sum of \$2,000,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-five, the sum of \$2,500,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-six, and annually thereafter, the sum of \$3,000,000. Said sums shall be allotted to the States in the proportion which their rural population bears to the total rural population in the United States, not including outlying possessions, according to the last preceding United States census: *Provided*, That the allotment of funds to any State shall be not less than a minimum of \$5,000 for any fiscal year prior to and including the fiscal year ending June thirtieth, nineteen hundred and twenty-three, nor less than \$10,000 for any fiscal year thereafter, and there is hereby appropriated the following sums, or so much thereof as may be necessary, which shall be used for the purpose of providing the minimum allotment to the States provided for in this section: For the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$48,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$34,000; for the fiscal year ending June thirtieth, nineteen hundred and

twenty, the sum of \$24,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, the sum of \$18,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-two, the sum of \$14,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-three, the sum of \$11,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-four, the sum of \$9,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-five, the sum of \$34,000; and annually thereafter the sum of \$27,000.

Sec. 3. That for the purpose of cooperating with the States in paying the salaries of teachers of trade, home economics, and industrial subjects there is hereby appropriated for the use of the States, for the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$500,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$750,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty, the sum of \$1,000,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, the sum of \$1,250,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-two, the sum of \$1,500,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-three, the sum of \$1,750,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-four, the sum of \$2,000,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-five, the sum of \$2,500,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-six, the sum of \$3,000,000; and annually thereafter the sum of \$3,000,000. Said sums shall be allotted to the States in the proportion which their urban population bears to the total urban population in the United States, not including outlying possessions, according to the last preceding United States census: *Provided*, That the allotment of funds to any State shall be not less than a minimum of \$5,000 for any fiscal year prior to and including the fiscal year ending June thirtieth, nineteen hundred and twenty-three, no less than \$10,000 for any fiscal year thereafter, and there is hereby appropriated the following sums, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum.

allotment to the States provided for in this section: For the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$66,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$46,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty, the sum of \$34,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, the sum of \$28,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-two, the sum of \$25,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-three, the sum of \$22,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-four, the sum of \$19,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-five, the sum of \$56,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-six, and annually thereafter, the sum of \$50,000.

That not more than twenty per centum of the money appropriated under this Act for the payment of salaries of teachers of trade, home economics, and industrial subjects, for any year, shall be expended for the salaries of teachers of home economics subjects.

Sec. 4. That for the purpose of co-operating with the States in preparing teachers, supervisors, and directors of agricultural subjects and teachers of trade and industrial and home economics subjects there is hereby appropriated for the use of the States for the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$500,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$700,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty, the sum of \$900,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, and annually thereafter, the sum of \$1,000,000. Said sums shall be allotted to the States in the proportion which their population bears to the total population of the United States, not including outlying possessions, according to the last preceding United States census: *Provided*, That the allotment of funds to any State shall be not less than a minimum of \$5,000 for any

fiscal year prior to and including the fiscal year ending June thirtieth, nineteen hundred and nineteen, nor less than \$10,000 for any fiscal year thereafter. And there is hereby appropriated the following sums, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum allotment provided for in this section: For the fiscal year ending June thirtieth, nineteen hundred and eighteen, the sum of \$46,000; for the fiscal year ending June thirtieth, nineteen hundred and nineteen, the sum of \$32,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty, the sum of \$24,000; for the fiscal year ending June thirtieth, nineteen hundred and twenty-one, and annually thereafter, the sum of \$90,000.

Sec. 5. That in order to secure the benefits of the appropriations provided for in sections two, three, and four of this Act, any State shall, through the legislative authority thereof, accept the provisions of this Act and designate or create a State board, consisting of not less than three members, and having all necessary power to cooperate, as herein provided, with the Federal Board for Vocational Education in the administration of the provisions of this Act. The State board of education, or other board having charge of the administration of public education in the State, or any State board having charge of the administration of any kind of vocational education in the State may, if the State so elect, be designated as the State board, for the purposes of this Act.

In any State the legislature of which does not meet in nineteen hundred and seventeen, if the governor of that State, so far as he is authorized to do so, shall accept the provisions of this Act and designate or create a State board of not less than three members to act in co-operation with the Federal Board for Vocational Education, the Federal board shall recognize such local board for the purposes of this Act until the legislature of such State meets in due course and has been in session sixty days.

Any State may accept the benefits of any one or more of the respective funds herein appropriated, and it may defer the acceptance of the benefits of any one or more of such funds, and shall be required to meet only the conditions relative to the fund or funds the benefits of which it has accepted: *Provided*, That after June thirtieth, nineteen hundred and twenty, no State shall receive any appropriation for salaries of teachers, supervisors, or directors of agricultural subjects until it shall have taken advantage of at least the minimum amount appropriated for the training of teachers, supervisors, or directors of agricultural subjects, as provided for in this Act, and that after said date no State shall receive any appropriation for the salaries of teachers of trade, home economics, and industrial subjects until it shall have taken advantage of at least the minimum amount appropriated for the training of teachers of trade, home economics, and industrial subjects, as provided for in this Act.

Sec. 6.² That a Federal Board for Vocational Education is hereby created, to consist of the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labour, the United States Commissioner of Education, and three citizens of the United States to be appointed by the President, by and with the advice and consent of the Senate. One of said three citizens shall be a representative of the manufacturing and commercial interests, one a representative of the agricultural interests, and one a representative of labour. The board shall elect annually one of its members as chairman. In the first instance, one of the citizen members shall be appointed for one year, one for two years, and one for three years, and thereafter for three years each. The members of the board other than the members of the Cabinet and the United States Commissioner of Education shall receive a salary of \$5,000 per annum.

The board shall have power to co-operate with State boards in carrying out the provisions of this Act. It shall be the duty of the Federal Board for Vocational Education to make, or cause to have made studies, investigations, and reports, with particular reference to their use in aiding the States in the establishment of vocational schools and classes and in giving

instruction in agriculture, trades and industries, commerce and commercial pursuits, and home economics. Such studies, investigations, and reports shall include agriculture and agricultural processes and requirements upon agricultural workers; trades, industries, and apprenticeships, trade and industrial requirements upon industrial workers, and classification of industrial processes and pursuits; commerce and commercial pursuits and requirements upon commercial workers; home management, domestic science, and the study of related facts and principles; and problems of administration of vocational schools and of courses of study and instruction in vocational subjects.

When the board deems it advisable such studies, investigations, and reports concerning agriculture, for the purposes of agricultural education, may be made in co-operation with or through the Department of Agriculture; such studies, investigations, and reports concerning trades and industries, for the purposes of trade and industrial education, may be made in co-operation with or through the Department of Labour; such studies, investigations, and reports concerning commerce and commercial pursuits, for the purposes of commercial education, may be made in co-operation with or through the Department of Commerce; such studies, investigations, and reports concerning the administration of vocational schools, courses of study and instruction in vocational subjects, may be made in co-operation with or through the Bureau of Education.

The Commissioner of Education may make such recommendations to the board relative to the administration of this Act as he may from time to time deem advisable. It shall be the duty of the chairman of the board to carry out the rules, regulations, and decisions which the board may adopt. The Federal Board for Vocational Education shall have power to employ such assistants as may be necessary to carry out the provisions of this Act. . .

Sec. 7. That in order for any State to receive the benefits of the appropriation in this Act for the training of teachers, supervisors, or directors of agricultural subjects, or of teachers

of trade, industrial or home economics subjects, the State board of such State shall provide in its plan for such training that the same shall be carried out under the supervision of the State board; that such training shall be given in schools or classes under public supervision or control; that such training shall be given only to persons who have had adequate vocational experience or contact in the line of work for which they are preparing themselves as teachers, supervisors, or directors, or who are acquiring such experience or contact as a part of their training; and that the State board, with the approval of the Federal board, shall establish minimum requirements for such experience or contact for teachers, supervisors, or directors of agricultural subjects and for teachers of trade, industrial, and home economics subjects; that not more than sixty per centum nor less than twenty per centum of the money appropriated under this Act for the training of teachers of vocational subjects to any State for any year shall be expended for any one of the following purposes: For the preparation of teachers, supervisors, or directors of agricultural subjects, or the preparation of teachers of trade and industrial subjects, or the preparation of teachers of home economics subjects.

Sec. 8. That in order to secure the benefits of the appropriations for the salaries of teachers, supervisors, or directors of agricultural subjects, or for the salaries of teachers of trade, home economics, and industrial subjects, or for the training of teachers as herein provided, any State shall, through the legislative authority thereof, appoint as custodian for said appropriations its State treasurer, who shall receive and provide for the proper custody and disbursements of all money paid to the State from said appropriations.

Sec. 9. That the Federal Board for Vocational Education shall annually ascertain whether the several States are using, or are prepared to use, the money received by them in accordance with the provisions of this Act. On or before the first day of January of each year the Federal Board for Vocational Education shall certify to the Secretary of the Treasury each State which has accepted the provisions of this Act and complied therewith, certifying the amounts which each State is entitled to

receive under the provisions of this Act. Upon such certification the Secretary of the Treasury shall pay quarterly to the custodian for vocational education of each State the moneys to which it is entitled under the provisions of this Act. The moneys so received by the custodian for vocational education for any State shall be paid out on the requisition of the State board as reimbursement for expenditures already incurred to such schools as are approved by said State board and are entitled to receive such moneys under the provisions of this Act.

Sec. 10. That whenever any portion of the fund annually allotted to any State has not been expended for the purpose provided for in this Act, a sum equal to such portion shall be deducted by the Federal board from the next succeeding annual allotment from such fund to such State.

Sec. 11. That the Federal Board for Vocational Education may withhold the allotment of moneys to any State whenever it shall be determined that such moneys are not being expended for the purposes and under the conditions of this Act.

If any allotment is withheld from any State, the State board of such State may appeal to the Congress of the United States, and if the Congress shall not direct such sum to be paid it shall be covered into the Treasury.

Sec. 12. That if any portion of the moneys received by the custodian for vocational education of any State under this Act, for any given purpose named in this Act, shall, by any action or contingency, be diminished or lost, it shall be replaced by such State, and until so replaced no subsequent appropriation for such education shall be paid to such State. No portion of any moneys appropriated under this Act for the benefit of the States shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings or equipment, or for the purchase or rental of lands, or for the support of any religious or privately owned or conducted school or college.

Sec. 13. That the Federal Board for Vocational Education shall make an annual report to Congress, on or before December first, on the administration of this Act and shall include in such report the reports made by the State boards on the administration of this Act by each State and the expenditure of the money allotted to each State.

Approved, February 23, 1917.

Act Extending Grants to Hawaii³

An Act to extend the provisions of certain laws to the Territory of Hawaii.

Sec. 4. The Territory of Hawaii shall be entitled to share in the benefits of the Act entitled "An Act to provide for the promotion of vocational education; to provide for co-operation with the States in the promotion of such education in agriculture and the trades and industries; to provide for co-operation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure," approved February 23, 1917, and any Act amendatory thereof or supplementary thereto, upon the same terms and conditions as any of the several States. There is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1925, and annually thereafter, the sum of \$30,000, to be available for allotment under such Act to the Territory.

Sec. 5. The Territory of Hawaii shall be entitled to share in the benefits of the Act entitled "An Act to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment," approved June 2, 1920, and any Act amendatory thereof or supplementary thereto, upon the same terms and conditions as any of the several States. There is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1925, a

annually thereafter, the sum of \$5,000, to be available for allotment under such Act to the Territory.

Approved, March 10, 1924.

Act Extending Grants to Puerto Rico⁴

An Act to extend the provisions of certain laws relating to vocational education and civilian rehabilitation to Porto Rico.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Porto Rico shall be entitled to share in the benefits of the Act entitled "An Act to provide for the promotion of vocational education; to provide for co-operation with the States in the promotion of such education in agriculture and the trades and industries; to provide for co-operation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure," approved February 23, 1917, and any Act amendatory thereof or supplementary thereto, upon the same terms and conditions as any of the several States. There is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, for the fiscal year ending June 30, 1932, and annually thereafter, the sum of \$105,000, to be available for allotment under such Act to the island of Porto Rico: *Provided, That* of the sum authorized to be appropriated for the purposes of this Act, the sum of \$30,000, if expended, shall be expended for the salaries of teachers of agricultural subjects; the sum of \$30,000, if expended, shall be expended for the salaries of teachers of home-economics subjects; the sum of \$30,000, if expended, shall be expended for the salaries of teachers of trade and industrial subjects; and the sum of \$15,000, if expended, shall be expended for the maintenance of teacher training, including supervision.

Sec. 2. Porto Rico shall be entitled to share in the benefits of the Act entitled "An Act to provide for the promotion of

vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment," approved June 2, 1920, and any Act amendatory thereof or supplementary thereto, upon the same terms and conditions as any of the several States. There is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, the sum of \$15,000 annually for a period of two years, commencing July 1, 1931, to be available for allotment under such Act to the island of Porto Rico.

Approved, March 3, 1931.

The George-Deen Act⁸

An Act to provide for the further development of vocational education in the several States and Territories.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of providing for the further development of vocational education in the several States and Territories there is hereby authorized to be appropriated for the fiscal year beginning July 1, 1937, and annually thereafter, the sum of \$12,000,000: *Provided*, That the several States and Territories shall be required to match by State or local funds or both 50 per centum of the appropriations authorized under the provisions of this section until June 30, 1942, 60 per centum for the year ending June 30, 1943, 70 per centum for the year ending June 30, 1944, 80 per centum for the year ending June 30, 1945, 90 per centum for the year ending June 30, 1946, and annually thereafter 100 per centum of the appropriations authorized under the provisions of this section. One-third of this sum each year shall be allotted to the States and Territories in the proportion that their farm population bears to the total farm population of the United States and Territories, according to the United States census last preceding the end of the fiscal year in which any such allotment is

made, and shall be used for the salaries and necessary travel expenses of teachers, supervisors, and directors of agricultural subjects in such States and Territories. One-third of the sum appropriated for each fiscal year shall be allotted to the States and Territories in the proportion that their rural population bears to the total rural population of the United States and Territories, according to the United States census last preceding the end of the fiscal year in which any such allotment is to be made, and shall be used for the salaries and travel expenses of teachers, supervisors, and directors of home-economics subjects in such States and Territories. One-third of the sum appropriated for each fiscal year shall be allotted to the States and Territories in the proportion that their non-farm population bears to the total non-farm population of the United States and Territories, according to the United States census last preceding the end of the fiscal year in which any such allotment is to be made, and shall be used for the salaries and necessary travel expenses of teachers, supervisors, and directors of trade and industrial subjects, in such States and Territories: *Provided further*, That the allotment of funds to any State or Territory for each of the three purposes enumerated in this section shall be not less than a minimum of \$20,000 for any fiscal year, 50 per centum of which shall be matched by State or local funds or both, and there is hereby authorized to be appropriated for the fiscal year beginning July 1, 1937, and annually thereafter the sum of \$175,000, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum allotments to the States and Territories provided for in this section.

Sec. 2. In addition to the sum authorized to be appropriated by section 1 hereof, there is hereby authorized to be appropriated, and required to be matched in the same proportions as such sum, the sum of 1,200,000, to be allotted to the States and Territories in the proportion that their total population bears to the total population of the United States and Territories, according to the United States census last preceding the end of the fiscal year in which any such allotment is.

made, and shall be used for the salaries and necessary travel expenses of teachers, supervisors, and directors of, and maintenance of teacher training in, distributive occupational subjects in such States and Territories; *Provided, however*, that the allotment of funds to any State or Territory for the purpose of this section shall be not less than a minimum of \$10,000 for any fiscal year after July 1, 1937, and there is hereby authorized to be appropriated for the fiscal year beginning July 1, 1937, and annually thereafter the sum of \$54,000, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum allotments to the States and Territories provided for in this section.

Sec. 3. That for the purpose of co-operating with the States and Territories in preparing teachers, supervisors, and directors of agricultural, trade and industrial, and home-economics subjects there is hereby authorized to be appropriated for the use of the several States and Territories for the fiscal year beginning July 1, 1937, and annually thereafter the sum of \$1,000,000. Said sum shall be allotted to the several States and Territories in the proportion which their population bears to the total population of the United States and Territories, according to the last preceding United States census; *Provided*, That the allotment of funds to any State or Territory shall be not less than a minimum of \$10,000 for any fiscal year. And there is hereby authorized to be appropriated for the fiscal year beginning after the enactment of the Act and annually thereafter the sum of \$54,000, or so much thereof as may be needed, which shall be used for the purpose of providing the minimum allotments to the States and Territories provided for in this section.

Sec. 4. For the purpose of carrying out the provisions of this Act there is hereby authorized to be appropriated to the Office of Education, Department of the Interior, for vocational education, for the fiscal year beginning July 1, 1937, and annually thereafter the sum of \$350,000, to be expended for the same purposes and in the same manner as provided in section 7 of the Act approved February 23, 1917, as amended October 6, 1917.

Sec. 5. The Secretary of the Treasury, through the Division of Disbursement of the Treasury Department, shall, upon the certification of the United States Commissioner of Education, pay, in equal semi-annual payments, on the 1st day of July and January of each year, to the custodian for vocational education of each State and Territory designated in the Act approved February 23, 1917, the moneys to which the State or Territory is entitled under the provisions of this Act.

Sec. 6. The appropriations made by this Act shall be in addition to, and shall be subject to the same conditions and limitations as, the appropriations made by the Act entitled "An Act to provide for the promotion of vocational education; to provide co-operation with the States in the promotion of such education in agriculture and in the trades and industries; to provide co-operation with the States in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditures", approved February 23, 1917, except that the appropriations made by this Act for home economics shall be subject to the conditions and limitations applicable to the appropriation for agricultural purposes under such Act of February 23, 1917, with the exception of that part of section 10 thereof which requires directed or supervised practice for at least six months per year; that such moneys as are provided by this Act for trade and industrial subjects, including public and other service occupations, may be expended for part-time classes operated for less than one hundred and forty-four hours per year; that the provisions of Section 11 of the Act of February 23, 1917, requiring at least one-third of the sum appropriated to any State to be expended for part-time schools or classes shall be held to include any part-time day-school classes for workers fourteen years of age and over, and evening-school classes for workers sixteen years of age and over; except that the appropriations made by this Act for distributive occupational subjects shall be limited to part-time and evening schools as provided in said Act of February 23, 1917, for trade, home economics, and industrial subjects and as qualified by the provisions of this section; and that the appropriations available under Section 4 of this Act shall be

available for expenses of attendance at meeting of educational associations and other organizations and for expenses of conferees called to meet in the District of Columbia or elsewhere, which, in the opinion of the Commissioner, are necessary for the efficient discharge of the provisions of this Act.

Sec. 6a. No part of the appropriations herein authorized shall be expended in industrial-plant training programmes, except such industrial-plant training be bona-fide vocational training, and not a device to utilize the services of vocational trainees for private profit.

Sec. 7. The appropriations authorized by this Act shall be in lieu thereof and not in addition to the appropriations authorized in Sections 1 and 2 of Public Law Numbered 245, Seventy-third Congress, approved May 21, 1934.

Sec. 8. As used in this Act the term "States and Territories" means the several States, the Territories of Alaska and Hawaii, the Island of Puerto Rico, and the District of Columbia.

Approved, June 8, 1936.

NOTES AND REFERENCES

1. 39 Stat. L. 929-36.
2. The functions of the Federal Board for Vocational Education were transferred to the Department of the Interior and the Board required to act in an advisory capacity without compensation by Section 16 of Executive Order No. 6166, June 10, 1933. Pursuant to this order, on October 10, 1933, the Secretary of the Interior issued an order transferring the functions of the Board to the Commissioner of Education and directing the organization of the necessary personnel as a subdivision of the Office of Education.
3. 43 Stat. L. 17-8.
4. 46 Stat. L. 1489.
5. 49 Stat. L. 1488-90.

Index

Index

- A Mountain School*, 84
Adams, Elizabeth Kemper, 96
Adjustment Service of New York City, 89-90
Albertson, Ralph, 45-46
Allen, Charles R., 48
Allen, Frederick J., 51, 55-57
Allen, Richard D., 38
American Association for Adult Education, 26
American Vocational Association Journal, 37
American Youth: An Annotated Bibliography, 29
Apprenticeship, 3-5, 231-34
Aptitudes and Aptitude Testing, 32
Ashley, 7
- Bankhead-Jones Act 1935, 139
Bentley, Jerome H. 89, 91, 93
Bingham, Walter V., 32, 38
Birbeck, George, 9
Blander, Margaret, 20
Blauch, Lloyd E., 19-20, 134
Bloomfield, Meyer, 46
Bonaparte, 11
Books About Jobs, 31
Boston, vocational education in, 45-48
Boston Home and School News Letter, 55
- Brewer, John M., 55, 57
Brewster, Royce E., 38
Broach, Howell H., 20
Brooks, Stratton D., 46-48, 49-50
Bown, Clara M., 20
Burdick, Anna L., 27
Bureau of Vocational Guidance, *see*, Vocation Bureau of Boston
Burr, Emily T., 100
Business Education World, 37
Business Employment, 55
Business Opportunities for Home Economics Trained Women, 34
Byrnes, 141
- Campion, Howard D., 33
Careers for Women, 84
Carpenter, O.F., 20
Cartwright, Morse A., 26-27
Chapman, Paul W., 34, 38
Child Study, 37
Christian's Fundamental Life Work Decision, 42
Churchill, 65
Civilian persons, employer of, 61
Clark, Harold F., 27, 33
Cocking, Walter D., 19
Cole, Robert C., 103
College students movement, towards vocational education, 84
Consumer goods, need for, 67-69

- Cookingham, Waldo B., 38
 Corre, Mary P., 36
 Cost, General, 5
 Contents for vocational education, 269-75
 Cresswell, Donald M., 30
 Cummings, Frances, 97
Current Notes on Women at Work, 99
 Darley, John G., 88
 Darling, Roland, 94
 Davis, Anne, 20
 Davis, Harvey N., 27
 Davis, Jesse B., 92-93, 103
 Davis, Philip, 50-51
 De Schweinitz, Dorothea, 33
 Della Vos, Victor, 13-15
 Dennis, L.H., 142-43
Dentistry as a Profession, 39
Dentistry: Its Professional Opportunities, 34
 Dickens, Charles, 7
 Dickerman, Watson B., 20
 Diebold, 78
 Dietz, J. Walter, 27
Directory of Colleges, Universities and Professional Schools Offering Training in Fields related to Health, 34
Directory of Colleges, Universities and Professional Schools Offering Training of Business and Industry, 34
Directory of Colleges, Universities and Professional Schools Offering Training Professions Other Than Those Concerned with Health and Art, 34
 Disney, 139
 Doerschuk, Beatrice, 85
 Douglas, William L., 47
 Edelman John, 115
 Edlund, Sidney W., 93
Education Digest, 37
Educational Abstracts, 105
 Edwards, R.H., 92
 Eisenhower, Dwight D., 60
 Eliot, 49
 Employment Manager's Association, organization of, 53-54
 English Poor Law of 1601, 4, 6
 Factory system, of production, 5-6
 Federal Board for Vocational Education, 154-76
 Federal Administrative control, 166-76
 research functions, 176
 staff in Federal Office, 159-62
 State Plans, 162-64, 168-71
 statement and policies, 164-66, 171-73
 Federal Government, place in vocational education, 279-89
 Federal Legislation on vocational education, 134-52
 Federal Office, staff in, 158-62
 Federally reimbursed programme of vocational education, evaluation of, 329-30
 financing of, 328
 organisation and administration of, 326-28
 Filene, Catherine, 84
 Filene, Edward A., 49
 Filene, Lincoln, 46, 48-50, 96
 Fitzgerald Act of 1947, 66, 232
 Fitzpatrick, 142
 Food, need for, 67-69
 Ford, Henry, 73
 Frederic, Katherine A., 19
 French Commission, 12-13
 Frey, 309
 Fuller, 142
 Future Craftsmen of America, 309-12, 322
 George, Walter, 139
 George-Barden Act, 81

- George-Deen Act, 17, 19, 81, 113,
139-46, 151, 164-65, 194, 197-
207, 209-10, 216, 326, 346-50
George-Ellzey Act, 138-39, 141,
144, 197-99, 202-06, 216, 224
George-Reed Act, 138, 216
Gerfen, V. L., 94
Globe, 49
Gompers, Samuel, 108
Green, William, 114
Greenleaf, Water J., 38
*Guidance Bibliographies for 1935
and 1936*, 33
*Guidance in Educational Institu-
tions*, 88
*Guidance Programmes for Rural
High Schools*, 34
Guiding Rural and Boys and Girls,
84
- Hambrecht, George P., 310
Hamilton, Grant, 108-09
Handicapped, guidance for, 101
Hanna, Joseph V., 93
Hanus, Paul H., 46, 48-49, 57
Harding, 56
Harvard, vocational education in,
45-48
Harvey, L.D., 15
Harvey, Oswald L., 20
Hatcher, Latham, 84
Hawkins, Layton S., 34, 38
Hayes, Mary H.S., 91
Hirth, Emma P., 85
Hobhouse, John, 7
Holder, Arthur E., 107
Home, needs of in modern society,
69-71
Hoover, 22
Hoppock, Robert, 31
Hurd, Archibald C., 102
- Industrial plant, vocational educa-
tion in, 312-16
- Institute of Women's Professional
Relations, publication of, 34
Institutions, for vocational educa-
tion, 228-31
Ittleson, Henry, 100
- Jackson, Florence, 99
Jager, Harry A., 34, 38
Jessup, Walter A., 27
Job Satisfaction, 31
Journal of Adult Education, 37
Journal of Education, 48-49
- Keller, Franklin J., 27-28, 32
Kelly, Roy W., 56-57
Kenny, Ralph B., 30
Keppel, Frederick P., 27
Kimball, Bradford F., 238
Kitson, Harry D., 30, 91, 105
Kiwam's Counselor's Handbook, 99
- Labour and Compensation*, 56
Labour representatives, views on
vocational education, 116-21
Lary, Stanley C., 96
Laws as a Vocation, 55
Lee, C. E., 93, 139
Leonard, Eugenie A., 38
*Life Earnings in Selected Occupa-
tions*, 133
Loebl, Stephen M., 20
Loomis, Edward H., 91
- Machines, and work, 71-76
Management and Men, 56
Mays, Arthur B., 2
McClure's Magazine, 49
Men, Women and Job, 88
Metcalf, Henry C., 46
*Minimum Essentials of the Indivi-
dual Inventory in Guidance*, 34
Minnesota Employment Research
Institute, stabilization in, 88-89
Modern society, needs of home in,
69-71

Cookingham, Waldo B., 38
 Corre, Mary P., 36
 Cost, General, 5
 Contents for vocational education,
 269-75
 Cresswell, Donald M., 30
 Cummings, Frances, 97
Current Notes on Women at Work,
 99

Darley, John G., 88
 Darling, Roland, 94
 Davis, Anne, 20
 Davis, Harvey N., 27
 Davis, Jesse B., 92-93, 103
 Davis, Philip, 50-51
 De Schweinitz, Dorothea, 33
 Della Vos, Victor, 13-15
 Dennis, L.H., 142-43
Dentistry as a Profession, 39
Dentistry: Its Professional Opportunities, 34
 Dickens, Charles, 7
 Dickerman, Watson B., 20
 Diebold, 78
 Dietz, J. Walter, 27
*Directory of Colleges, Universities
 and Professional Schools Offering
 Training in Fields related to
 Health*, 34
*Directory of Colleges, Universities
 and Professional Schools Offering
 Training of Business and
 Industry*, 34
*Directory of Colleges, Universities
 and Professional Schools Offering
 Training Professions Other Than
 Those Concerned with Health
 and Art*, 34
 Disney, 139
 Doerschuk, Beatrice, 85
 Douglas, William L., 47

Edelman John, 115
 Edlund, Sidney W., 93

Education Digest, 37
Educational Abstracts, 105
 Edwards, R.H., 92
 Eisenhower, Dwight D., 60
 Eliot, 49
 Employment Manager's Association,
 organization of, 53-54
 English Poor Law of 1601, 4, 6
 Factory system, of production, 5-6
 Federal Board for Vocational
 Education, 154-76
 Federal Administrative control,
 166-76
 research functions, 176
 staff in Federal Office, 159-62
 State Plans, 162-64, 168-71
 statement and policies, 164-66,
 171-73
 Federal Government, place in
 vocational education, 279-89
 Federal Legislation on vocational
 education, 134-52
 Federal Office, staff in, 158-62
 Federally reimbursed programme
 of vocational education,
 evaluation of, 329-30
 financing of, 328
 organisation and administration
 of, 326-28
 Filene, Catherine, 84
 Filene, Edward A., 49
 Filene, Lincoln, 46, 48-50, 96
 Fitzgerald Act of 1947, 66, 232
 Fitzpatrick, 142
 Food, need for, 67-69
 Ford, Henry, 73
 Frederic, Katherine A., 19
 French Commission, 12-13
 Frey, 309
 Fuller, 142
 Future Craftsmen of America, 309-
 12, 322

George, Walter, 139
 George-Barden Act, 81

- George-Deen Act, 17, 19, 81, 113,
 139-46, 151, 164-65, 194, 197-
 207, 209-10, 216, 326, 346-50
 George-Ellzey Act, 138-39, 141,
 144, 197-99, 202-06, 216, 224
 George-Reed Act, 138, 216
 Gerfen, V. L., 94
Globe, 49
 Gompers, Samuel, 108
 Green, William, 114
 Greenleaf, Water J., 38
*Guidance Bibliographies for 1935
 and 1936*, 33
*Guidance in Educational Institu-
 tions*, 88
*Guidance Programmes for Rural
 High Schools*, 34
Guiding Rural and Boys and Girls,
 84
- Hambrecht, George P., 310
 Hamilton, Grant, 108-09
 Handicapped, guidance for, 101
 Hanna, Joseph V., 93
 Hanus, Paul H., 46, 48-49, 57
 Harding, 56
 Harvard, vocational education in,
 45-48
 Harvey, L.D., 15
 Harvey, Oswald L., 20
 Hatcher, Latham, 84
 Hawkins, Layton S., 34, 38
 Hayes, Mary H.S., 91
 Hirth, Emma P., 85
 Hobhouse, John, 7
 Holder, Arthur E., 107
 Home, needs of in modern society,
 69-71
 Hoover, 22
 Hoppock, Robert, 31
 Hurd, Archibald C., 102
- Industrial plant, vocational educa-
 tion in, 312-16
- Institute of Women's Professional
 Relations, publication of, 34
 Institutions, for vocational educa-
 tion, 228-31
 Ittleeson, Henry, 100
- Jackson, Florence, 99
 Jager, Harry A., 34, 38
 Jessup, Walter A., 27
Job Satisfaction, 31
Journal of Adult Education, 37
Journal of Education, 48-49
- Keller, Franklin J., 27-28, 32
 Kelly, Roy W., 56-57
 Kenny, Ralph B., 30
 Keppel, Frederick P., 27
 Kimball, Bradford F., 238
 Kitson, Harry D., 30, 91, 105
Kiwan's Counselor's Handbook, 99
- Labour and Compensation*, 56
 Labour representatives, views on
 vocational education, 116-21
 Lary, Stanley C., 96
Laws as a Vocation, 55
 Lee, C. E., 93, 139
 Leonard, Eugenie A., 38
*Life Earnings in Selected Occupa-
 tions*, 133
 Loeb, Stephen M., 20
 Loomis, Edward H., 91
- Machines, and work, 71-76
Management and Men, 56
 Mays, Arthur B., 2
McClure's Magazine, 49
Men, Women and Job, 88
 Metcalf, Henry C., 46
*Minimum Essentials of the Indivi-
 dual Inventory in Guidance*, 34
 Minnesota Employment Research
 Institute, stabilization in, 88-89
 Modern society, needs of home in,
 69-71

- Monroe, James P., 49
 Morrill Act of 1862, 134, 167
 Morris, Burt J., 57
Monthly Labour Review, 94
 Munsterberg, Hugo, 49
- National Education Association Journal*, 37
 National Industrial Recovery Act, 232
 National Occupational Conference (NOC) America, 26-43
 conferences sponsored, 40-41
 field services, 34, 38
 occupational tours, 38-40
 other activities, 41-43
 publications, 27-34
 National Vocational Guidance Association (NVGA), 28-30, 34, 41-42
Nation's Business, 37
 Negroes organization, 101-02
 Newton, Hazel, 100
 Non-farm labour, 72
- Occupation information, bureau of, 85
Occupational: The Vocational Guidance Magazine, 28-30, 33, 35, 37, 39, 42
Occupational Abstracts, 31
Occupational Adjustment, 32
Occupational Counselling Technique, 42
 Occupational distribution, effect of, 237-38
 Occupational groups, of workers, 63
Occupational Index, 30-31
Occupational Information and Guidance; Organisation and Administration, 34
 Occupational outlet service, need for, 238-44
Occupations for Women, 84
Occupation in Retail Stores, 33
- Ohl, Henry, 114, 310
 Olson, Marion E., 20
Opportunity, 37, 101
 Orata, Pedro T., 38
 Organised labour, on vocational education, 290-323
- Pearl Harbar, 79
 Page, Carroll S., 108-09
 Palmisano, 17
 Parents and voters, role in vocational education, 102
 Parker, Julia O'Connor, 20
 Parker, Williard E., 31
 Parsons, Frank, 45-50, 81
 Paull, Charles H., 57
 Peel, Robert, 6-7
 Person, Harlow S., 53
 Peterson, Donald G., 27, 88
Phi Delta Kappa, 37, 105
Philadelphia Record, 115
 Power, Leonard, 20
 Powers, J. Orin, 20
Preventive Management, 56
 Production, factory system of, 5-6
 Professional and labour organizations, activities of, 95-98
 Prosser, Charles A., 48
 Pruette, Lorine, 33
Psychological Abstracts, 85
 Public schools, as institutions for vocational education, 228-31
- Rees, Robert I., 27, 33
 Religious organizations, work for vocational education, 92, 95
 Research and service institutes, work for vocational education, 84-85
 Rhodes, Opal T., 20
 Richards, Ellen H., 96
Robert Irwin Rees—An Appreciation, 33
 Robinson, C.C., 93, 105
 Rochester Athenaeum, 91
 Roosevelt, Franklin D., 17, 155
 Rosenberry, Lois K. M., 96

Index

Ruch, Giles M., 34
Rural Girls in the City for Work,
 84

Rural youth, guidance for, 82-84

Russell, James E., 27

School and Society, 37

School and the Start in Life, 53

School programmes, vocational
 education in, 128-32, 235-36,
 258-69, 290-309

Scientific Movement in Education,
 88

Secondary schools, vocational
 education in, 135, 290-309

Segel, David, 34

Semi-skilled labour, 72

Service clubs, role in vocational
 education, 98-100

Shaw, Pauline Agassiz, 46

Shedd, Clarence P., 92

Shoe Industry, 55

Shouse, Jouett, *see*, Filene,
 Catherine

Skilled workers,
 demand and supply, 60-66, 72
 service and, 66, 67

Skinner, Mary E., 20

Smith, Fred C., 17, 30, 57

Smith, Lewis W., 20

Smith-Hughes Act, 107, 110-11,
 136-38, 141, 144-46, 154-55, 160,
 162, 164, 166-69, 171, 175-76,
 197-207, 216, 247, 251, 281, 285-
 86, 313, 316, 320, 326-27, 330,
 335-44

Smith-Lever Act, 167, 199, 202

Snedden, David, 48-49

Social agencies, contribution to
 vocational education, 81-84

Southey, 7

Spafford, 70

Spates, Thomas G., 27

Special Librarianship as Career, 34

Stead, William H., 42

Stimson, Rufus W., 48-49

Stoddard, Alexander J., 27, 38-39

Studebaker, John W., 37

Super, Donald E., 91, 93

Suzzallo, Henry, 22

Talbot, Emily Fairbanks, 96

Talbot, Marion, 95-96

Tanney-hill, Ann, 102

Teachers, for vocational education,
 275-76

Technology, application of, 76-78

Telegram, 105

*Training for the Professions and
 Allied Occupations*, 85

*Two Centuries of Student Christian
 Movements*, 92

United States Office of Education,
 publications, 34, 37-39

Unskilled labour, 72

Veteles, Morris S., 32

Vital Speeches, 37

Vocation Bureau of Boston, 45-58

under Bloomfield, 50-56

under David Stone Wheeler, 47-
 50

under Parson, 45-47

work of, 57-58

Vocational education,

apprenticeship and, 231-34

attitude towards, 107-15, 124-26

committee on, 17-19

content in, 269-75

contribution of, 81-106

college students, 84

educational organisations, 85-
 88

independent institutions, 88-
 91

other than schools, 102-05

professional and labour orga-
 nizations, 95-98

religious organizations, 92-95

research and service institutes, 84-85
 service clubs, 98-100
 social agencies, 81-84
 welfare organizations, 100-06
 cost of, 276-77
 definition of, 132-34
 development of, 128-32
 dissatisfaction, reasons for, 115-25
 employers view on, 292-94
 federal Legislation on, 134-52, 335-50
 funds provided by, 145-51, 326-30
 summary of provisions of, 143-52
 Federal participation in, 154-76
 financing of, 193-225, 282-85, 326-30
 distribution of funds, 206-20
 basis of, 215-20
 objection to, 210-15
 minimum appropriation, 197-202
 revision of, unused funds, 202-06
 states and local communities, 221-25, 282-84
 groups to be served by, 244-58
 by age and school status, 245-53
 by ability, 253-54
 by residence, 254-58
 history of, 1-17, 107-26
 in America, 8-10, 26-43, 107-26, 128-52, 154-225, 279-89
 in Boston and Harvard, 45-58
 in England, 3-10
 in France, 10-13
 in industrial plants, 312-16
 in Russia, 13-16
 institutions for, 228-31, 316-18
 investigation on, 19-21
 labour representatives views on, 116-21, 295-96

memorandums on, 19-21
 modern society and, 227-77
 national defense and, 79-81
 occupational distribution, 237-44
 occupations for, 258-69
 organized labour on, 290-323
 place of federal government in, 279-89, 326-30
 school programmes, 235-37, 258-69
 studies on, 19-27
 teachers for, 275-6
 Vocational educational institutions
 labour representation on advisory boards of, 316-18
Vocational Guidance and Vocational Education for the Industries, 88
Vocational Guidance Bulletin, 55
Vocational Guidance for Boys, 103
Vocational Guidance Magazine, 57
Vocational Guidance Movement, 55, 57
Vocational Guidance of Youth, 52
Vocational Guidance Throughout the World, 32
Vocational Schools of Essex County, New Jersey, 33
Vocational Training, 96

Ware, Fabian, 9
 Watt, James, 7
 Weaver, Eli, 49, 93
 Weaver, Robert C., 20
 Welfare organization, role in vocational education, 100-02
 Wheeler, David Stone, 45, 47-51
 Wiener, 76
 Wilbur, Ray Lyman, 22
 Wilkerson, Doxey A., 20
Will of God a Man's Life Work, 92
 Wilson, L. A., 136, 142
 Winship, Albert E., 48
Women Worker Through the Depression, 33

Index

Women's Work and Education, 85

Wood, Ben D., 27

Work and machines, 71-76

Wright, Carroll D., 48

Wright, Henry B., 92

Xenophon, 2, 5

Youth, School and Vocation, 54

Zapoleon, Marguerite W., 38

Zueblin, Charles, 47

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